CDX-5290RDS

SERVICE MANUAL

AEP Model
Hong Kong Model

Model Name Using Similar Mechanism	CDX-5470RDS
CD Drive Mechanism Type	MG-305X-130
Optical Pick-Up Name	KSS-410A

SPECIFICATIONS

CD player section

System	Compact disc digital audio system
Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit

Tuner section

FM

Tuning range	87.5 – 108.0 MHz
Antenna terminal	External antenna connector
Intermediate freqency	10.7 MHz
Usable sensitivity	8 dBf
Selectivity	78 dB at 400 kHz
Signal-to-noise ratio	65 dB (stereo), 68 dB (mono)
Harmonic distortion at 1 kHz	0.5% (stereo), 0.3% (mono)
Separation	35 dB at 1 kHz
Frequency response	30 – 15,000 Hz
Capture ratio	2 dB

MW/LW

Tuning range	MW: 531 – 1,602 kHz LW: 153 – 281 kHz
Antenna terminal	External antenna connector
Intermediate frequency	10.71 MHz/450kHz
Sensitivity	MW: 30 μV LW: 50 μV

Power amplifier section

Outputs	Speaker outputs (sure seal connectors)
Speaker impedance	4 – 8 ohms
Maximum power output	30 W × 4 (at 4 ohms)

General

Output lead	Power antenna relay control lead power amplifier control lead
Tone controls	Bass ± 8 dB at 100 Hz Treble ± 8 dB at 10 kHz
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 188 × 50 × 177 mm (w/h/d) not ind. projecting parts and controls
Mounting dimension	Approx. 178 × 50 × 154 mm (w/h/d) not ind. projecting parts and controls
Mass	Approx.1.5 kg
Supplied accessories	Power connecting cord (1) Mounting hardware (1 set) Front panel case (1)

Design and specifications are subject to change without noise.

FM/MW/LW COMPACT DISC PLAYER

SONY®

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SUPPLEMENT-1		

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SERVICING NOTES

Laser Diode Properties

- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output Power: less than 44.6 μW*

  * This output is the value measured at a distance of 200 mm from the objective lens surfase on the Optical Pick-up Block.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radistion exposure.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

The flexible board is easily damaged and should be handled with care.

This section is extracted from instruction manual.

SECTION 1
GENERAL

Installation

Precautions

- Do not tamper with the four holes on the upper surface of the unit. They are for tuner adjustments to be done only by service technicians.
- Choose the installation location carefully so that the unit will not hamper the driver during driving.
- Avoid installing the unit where it would be subject to high temperatures, such as from direct sunlight or hot air from the heater, or where it would be subject to dust, dirt or excessive vibration.
- Use only the supplied mounting hardware for a safe and secure installation.

Mounting angle adjustment

Adjust the mounting angle to less than 20°.

How to Detach and Attach the Front Panel

Before installing the unit, detach the front panel.

To detach

Before detaching the front panel, be sure to press the OFF button first. Then press the RELEASE button to open up the front panel, and detach the panel by pulling it towards you as illustrated.

To attach

Align the parts Ⓐ and Ⓑ, and push the front panel until it clicks.

Installation

Précautions

- Ne pas toucher les quatre orifices sur le panneau supérieur de l'appareil. Ils servent aux réglages du tuner qui ne doivent être effectués que par un technicien.
- Choisir soigneusement l'emplacement de l'installation, pour que l'appareil ne gêne pas la conduite.
- Eviter d'installer l'appareil dans un endroit exposé à des températures élevées, comme en plein soleil ou à proximité d'une bouche d'air chaud, ou à de la poussière, saleté ou vibrations violentes.
- Pour garantir un montage sûr, n'utiliser que le matériel fourni.

Réglage de l'angle de montage

Ajuster l'inclinaison à un angle inférieur à 20°.

Retrait et pose de la façade

Avant d'installer l'appareil, déposer la façade.

Retrait

Avant de détacher la façade, appuyez sur la touche OFF. Appuyez ensuite sur la touche RELEASE pour ouvrir la façade. Enlevez-la en la tirant vers vous, comme indiqué sur l'illustration.

Pose

Aligner les points Ⓐ et Ⓑ, puis pousser l'appareil jusqu'au déclic.

Installation

Vorsichtsmaßnahmen

- Nehmen Sie an den vier Öffnungen an der Oberseite des Geräts keine Einstellungen vor. Diese Öffnungen dienen dem Tuner-Abgleich; der Abgleich darf nur von einem Fachmann vorgenommen werden.
- Wählen Sie den Einbauort sorgfältig so aus, daß das Gerät die Bedienung des Fahrzeugs nicht behindert.
- Bauen Sie das Gerät so ein, daß es keinen hohen Temperaturen (keinem direkten Sonnenlicht, keiner Warmluft von der Heizung), keinem Staub, keinem Schmutz und keinen starken Vibrationen ausgesetzt ist.
- Für eine sichere Befestigung verwenden Sie stets nur die mitgelieferten Montageteile.

Hinweis zum Montagewinkel

Das Gerät sollte in einem Winkel von weniger als 20° montiert werden.

Abnehmen und Anbringen der Frontplatte

Nehmen Sie die Frontplatte vor dem Einbau des Geräts ab.

Zum Abnehmen

Drücken Sie zuerst die Taste OFF, um das Gerät auszuschalten. Lösen Sie dann die Frontplatte durch Drücken der RELEASE-Taste, und ziehen Sie die Frontplatte, wie in der Abbildung gezeigt, ab.

Zum Anbringen

Richten Sie Teil Ⓐ auf Teil Ⓑ aus, und drücken Sie die Frontplatte fest, so daß sie mit einem Klicken einrastet.

Installazione

Precauzioni

- Non toccare i quattro fori sulla superficie superiore dell'apparecchio. Servono per regolazioni del sintonizzatore che devono essere eseguite solo da tecnici per la manutenzione.
- Scegliere con attenzione il luogo di montaggio in modo che l'apparecchio non interferisca con le normali operazioni di guida del conducente.
- Evitare di installare l'apparecchio dove sia soggetto ad alte temperature, come all'esposizione alla luce solare diretta o al getto di aria calda dell'impianto di riscaldamento, o dove possa essere soggetto a polvere, sporco e vibrazioni eccessive.
- Usare solo il materiale di montaggio in dotazione per un'installazione stabile e sicura.

Regolazione dell'angolo di montaggio

Regolare l'angolo di montaggio in modo che sia inferiore a 20°.

Come staccare e attaccare il pannello anteriore

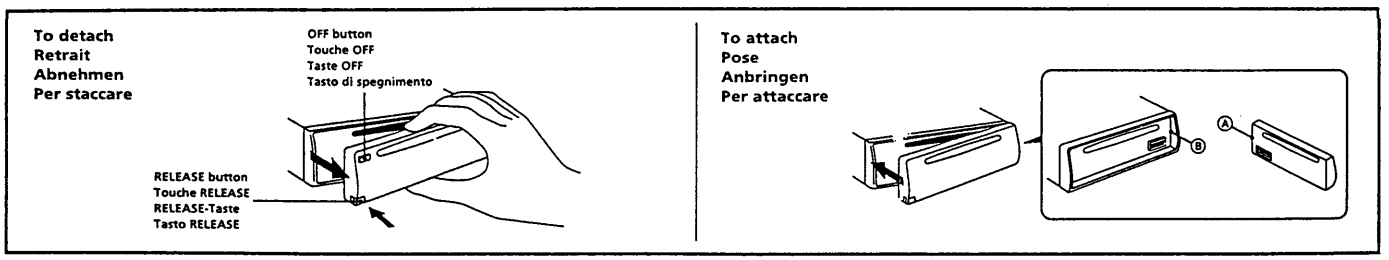
Prima di installare l'apparecchio staccare il pannello anteriore.

Per staccare il pannello anteriore

Prima di staccare il pannello anteriore, premere il tasto OFF. Quindi premere il tasto RELEASE per aprire il pannello e staccarlo tirandolo verso di sé come mostrato nell'illustrazione.

Per attaccare il pannello posteriore

Allineare le parti Ⓐ e Ⓑ e spingere il pannello anteriore fino a udire uno scatto.



Mounting Example

Installation in the dashboard

Exemple de montage

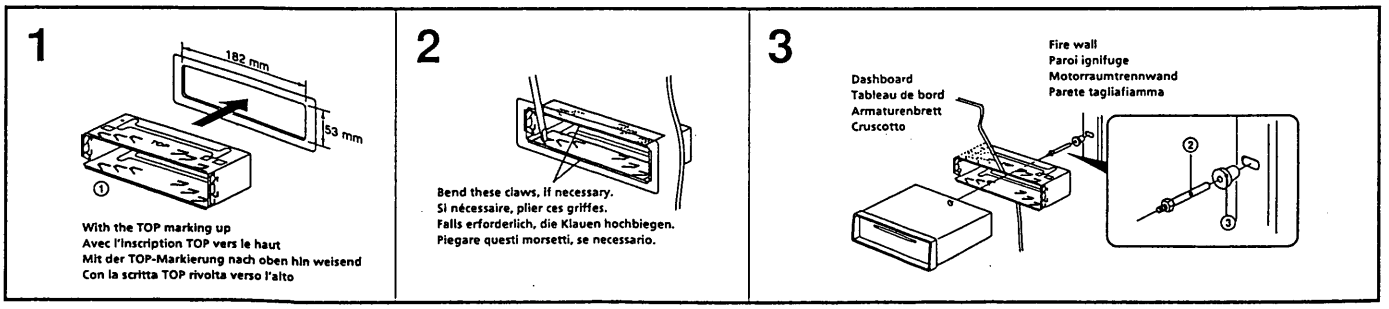
Installation dans le tableau de bord

Einbaubeispiel

Installation im Armaturenbrett

Esempio di montaggio

Installazione nel cruscotto



Connections

Caution

- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the yellow and red power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- Run all ground wires to a common ground point.

If Your Car has No Accessory Position on the Ignition Key Switch — POWER SELECT Switch

The illumination on the front panel is factory-set to be turned on even when the unit is not being played. However, this setting may cause some car battery wear if your car has no accessory position on the ignition key switch. To avoid this battery wear, set the POWER SELECT switch located on the bottom of the unit to the ⓑ position, then press the reset button. The illumination is reset to stay off while the unit is not being played.

Note

The caution alarm for the front panel is not activated when the POWER SELECT switch is set to the ⓓ position.

Connexions

Précautions

- Cet appareil est conçu pour fonctionner sur courant continu de 12 V avec masse négative.
- Avant d'effectuer les connexions, débrancher la borne de terre de la batterie du véhicule pour éviter tout court-circuit.
- Brancher les fils d'entrée d'alimentation jaune et rouge seulement après avoir terminé tous les autres branchements.
- Veiller à ne pas raccorder le fil rouge d'entrée d'alimentation à la borne positive de 12 V qui est alimentée quand la clé de contact est sur la position accessoires.
- Rassembler tous les fils de terre en un point de masse commun.

Si l'appareil est utilisé dans une voiture dont la clé de contact n'a pas de position accessoires — Interrupteur POWER SELECT

L'éclairage du panneau avant est réglé en usine de manière à s'allumer même quand l'appareil ne fonctionne pas. Cependant, ce réglage risque d'épuiser la batterie si l'appareil est utilisé dans une voiture dont la clé de contact ne possède pas de position accessoires. Pour éviter d'épuiser la batterie, régler l'interrupteur POWER SELECT sur le socle de l'appareil sur la position ⓑ, puis appuyer sur la touche de réinitialisation. L'éclairage est réglé pour rester éteint quand l'appareil n'est pas utilisé.

Remarque

Quand l'interrupteur POWER SELECT est réglé sur la position ⓓ, l'avertisseur du panneau avant ne fonctionne pas.

Anschluß

Vorsicht

- Dieses Gerät ist ausschließlich für eine negativ geerdete 12-V-Autobatterie bestimmt.
- Trennen Sie vor dem Anschließen des Geräts die Erdungsklemme der Batterie ab, um einen Kurzschluß zu vermeiden.
- Schließen Sie das gelbe und rote Stromversorgungskabel erst an, wenn alle anderen Kabel bereits angeschlossen sind.
- Leiten Sie das rote Stromversorgungskabel an einen positiven 12-V-Kontakt, an dem Spannung anliegt, wenn sich das Zündschloß in der Position I bzw. ACC (Position vor der Zündposition) befindet.
- Schließen Sie alle Erdungskabel an einen gemeinsamen Massepunkt an.

Wenn das Zündschloß Ihres Wagens keine Position I bzw. ACC besitzt — POWER SELECT-Schalter

Das Gerät ist werkseitig so voreingestellt, daß das Bedienfeld auch dann beleuchtet ist, wenn das Gerät nicht betrieben wird. Besitzt das Zündschloß Ihres Fahrzeugs keine Position I bzw. ACC, so ist die Beleuchtung ständig eingeschaltet und entzieht der Batterie Strom. Stellen Sie in einem solchen Fall den POWER SELECT-Schalter an der Unterseite des Geräts auf Position ⓑ, und drücken Sie dann die Rücksetztaste. Bei ausgeschaltetem Gerät ist das Bedienfeld dann nicht mehr beleuchtet.

Hinweis

Der Warnton für die Frontplatte ertönt nicht, wenn der POWER SELECT-Schalter auf Position ⓑ gestellt ist.

Collegamenti

Attenzione

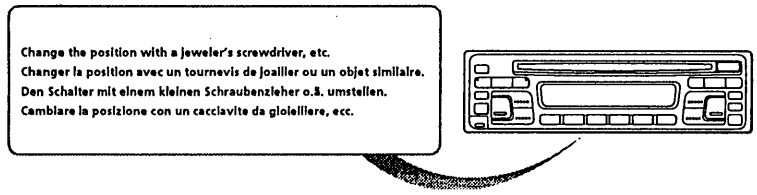
- Questo apparecchio è stato progettato per l'uso solo a 12 V CC con massa negativa.
- Prima di eseguire i collegamenti, scollegare il terminale di massa della batteria dell'auto per evitare cortocircuiti.
- Collegare i cavi di collegamento alimentazione rosso e giallo solo dopo aver collegato tutti gli altri cavi.
- Assicurarsi di collegare il cavo rosso di collegamento alimentazione al terminale di alimentazione 12 V positivo che è sotto tensione quando la chiavetta di accensione è in posizione accessoria.
- Portare tutti i cavi di massa a un punto di massa comune.

Quando si usa l'apparecchio in un'auto priva di posizione accessoria per la chiavetta di accensione — Interruttore POWER SELECT

L'illuminazione del pannello anteriore è stata predisposta in fabbrica per l'attivazione anche quando non si usa l'apparecchio. Tuttavia questa regolazione può causare scaricamento della batteria dell'auto se si usa l'apparecchio in un'auto priva di posizione accessoria per la chiavetta di accensione. Per evitare ciò, regolare su ⓑ l'interruttore POWER SELECT situato alla base dell'apparecchio e quindi premere il tasto di azzeramento. L'illuminazione rimane così spenta finché l'apparecchio rimane spento.

Nota

La suoneria di avvertimento per il pannello anteriore non si attiva quando l'interruttore POWER SELECT è in posizione ⓓ


Change the position with a jeweler's screwdriver, etc.
Changer la position avec un tournevis de joaillier ou un objet similaire.
Den Schalter mit einem kleinen Schraubenzieher o.ä. umstellen.
Cambiare la posizione con un cacciavite da gioielliere, ecc.

Reset Button

When the installation and connections are over, be sure to press the reset button with a ball-point pen etc.

Touche de réinitialisation

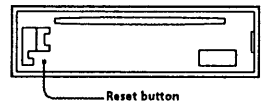
Quand l'installation et les connexions sont terminées, appuyer sur la touche de réinitialisation avec un stylo bille ou un objet pointu.

Rücksetztaste

Nach der Installation und dem Anschluß muß die Rücksetztaste mit einem Kugelschreiber o.ä. gedrückt werden.

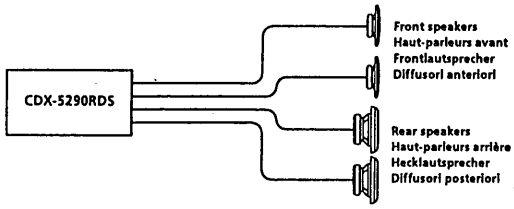
Pulsante di azzeramento

Dopo avere terminato l'installazione e i collegamenti, assicurarsi di premere il pulsante di azzeramento con la punta di una penna a sfera ecc.

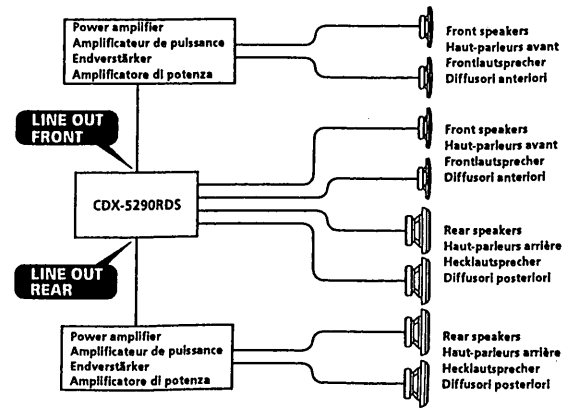


Connection Diagram — Schémas de connexion — Anschlußdiagramm — Schema di collegamento

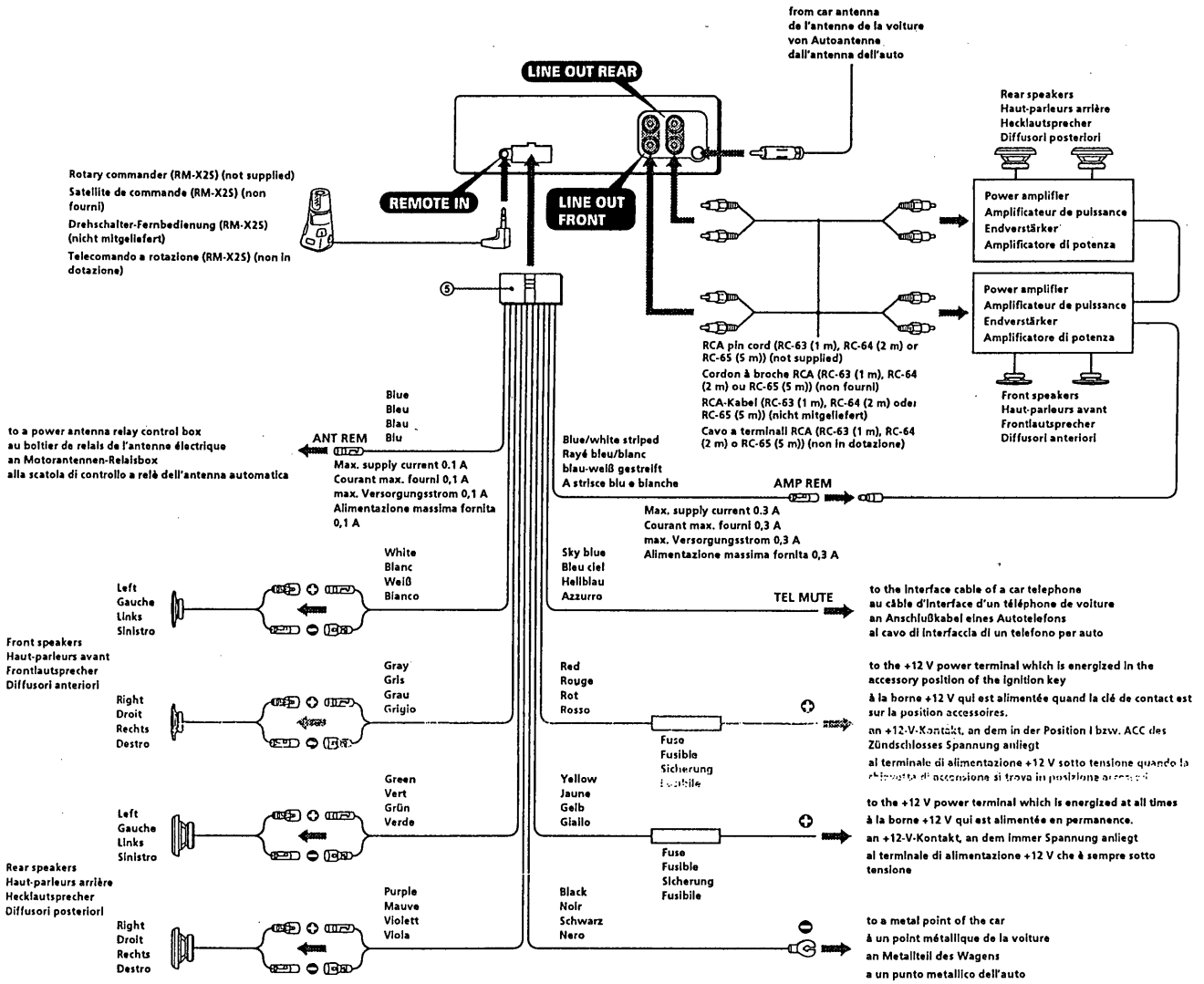
Example 1/Exemple 1/Beispiel 1/Esempio 1



Example 2/Exemple 2/Beispiel 2/Esempio 2



Connections of Example — Connexions de l'exemple — Anschlußbeispiel — Esempi di Collegamento



Notes on the control leads

- *The power antenna control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency) or the TA (Traffic Announcement) function.*
- *A power antenna without relay box cannot be used with this unit.*

Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

Notes on speaker connection

- *Before connecting the speakers, turn the unit off.*
- *Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.*
- *Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.*
- *Do not attempt to connect the speakers in parallel.*
- *Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.*

Remarques sur les fils de contrôle

- *Le fil de contrôle de l'antenne électrique (bleu) fournit du courant continu de +12 V quand le tuner est allumé ou quand la fonction AF (Fréquences alternatives) ou TA (Informations routières) est mise en service.*
- *Une antenne électrique sans boîtier de relais ne peut pas être utilisée avec cet appareil.*

Connexion pour la conservation de la mémoire

Lorsque le fil d'entrée d'alimentation jaune est connecté, le circuit de la mémoire est alimenté en permanence même si la clé de contact est sur la position d'arrêt.

Remarques sur la connexion des haut-parleurs

- *Avant de raccorder les haut-parleurs, mettre l'appareil hors tension.*
- *Utiliser des haut-parleurs ayant une impédance de 4 à 8 ohms et une capacité adéquate sous peine de les endommager.*
- *Ne pas raccorder les bornes du système de haut-parleurs au châssis de la voiture et ne pas connecter les bornes du haut-parleur droit à celles du haut-parleur gauche.*
- *Ne pas tenter de raccorder les haut-parleurs en parallèle.*
- *Ne pas raccorder des haut-parleurs actifs (avec amplificateurs intégrés) aux bornes de haut-parleur de l'appareil sous peine de les endommager. Veiller à raccorder des haut-parleurs passifs à ces bornes.*

Hinweise zu den Steuerleitungen

- *Die (blaue) Motorantennen-Steuerleitung liefert eine Gleichspannung von +12 V, wenn der Tuner eingeschaltet, die AF-Funktion (Alternative Frequency) oder die TA-Funktion (Traffic Announcement) aktiviert ist.*
- *Eine Motorantenne ohne Relaisbox kann nicht angeschlossen werden.*

Zur Stromversorgung des Speichers

Wenn das gelbe Stromversorgungskabel angeschlossen ist, wird der Speicher stets (auch bei ausgeschalteter Zündung) mit Strom versorgt.

Hinweise zum Lautsprecheranschluß

- *Schalten Sie das Gerät aus, bevor Sie die Lautsprecher anschließen.*
- *Verwenden Sie Lautsprecher mit einer Impedanz zwischen 4 und 8 Ohm und ausreichender Belastbarkeit. Ansonsten können die Lautsprecher beschädigt werden.*
- *Verbinden Sie die Lautsprecherannschlüsse nicht mit dem Wagenchassis, und verbinden Sie auch nicht die Anschlüsse des rechten mit denen des linken Lautsprechers.*
- *Versuchen Sie nicht, Lautsprecher parallel anzuschließen.*
- *An die Lautsprecheranschlüsse dieses Geräts dürfen nur Passivlautsprecher angeschlossen werden. Schließen Sie keine Aktivlautsprecher (Lautsprecher mit eingebauten Verstärkern) an, da diese sonst beschädigt werden können.*

Note sui cavi di collegamento

- *Il cavo di controllo dell'antenna automatica (blu) fornisce +12 V CC quando si accende il sintonizzatore o quando si attiva la funzione AF (frequenze alternative) o la funzione TA (notiziari sul traffico).*
- *Non è possibile usare un'antenna automatica senza la scatola a relè con questo apparecchio.*

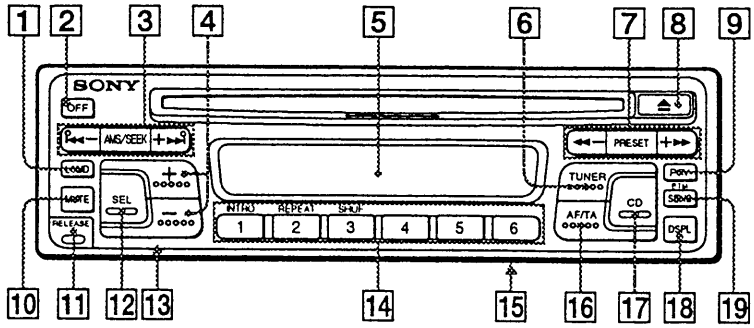
Collegamento per la conservazione della memoria

Quando il cavo di ingresso alimentazione giallo è collegato, viene sempre fornita alimentazione al circuito di memoria anche quando la chiavetta di accensione è spenta.

Note sul collegamento dei diffusori

- *Prima di collegare i diffusori spegnere l'apparecchio.*
- *Usare diffusori di impedenza compresa tra 4 e 8 ohm e con capacità di potenza adeguate, altrimenti i diffusori possono essere danneggiati.*
- *Non collegare i terminali del sistema diffusori al telaio dell'auto e non collegare i terminali del diffusore destro a quelli del diffusore sinistro.*
- *Non collegare i diffusori in parallelo.*
- *Non collegare alcun diffusore attivo (con amplificatore incorporato) ai terminali diffusori dell'apparecchio perché questo può danneggiare i diffusori attivi. Assicurarsi di collegare diffusori passivi a questi terminali.*

Location of Controls



Refer to the pages in ● for details.

1 LOUD (loudness) button ❾

2 OFF button ❹❺❻❾

3 AMS/SEEK (Automatic Music Sensor/ automatic tuning) button ❻❼

4 (volume/bass/treble/ balance/fader control) button ❺❾

5 Display window

6 (radio on/band select) button ❻❼

7 PRESET (preset search) button ❻❽

8 ⏏ (eject) button ❺❾

9 SENS (sensitivity adjust) button ❼

10 MUTE button ❾

11 RELEASE (front panel release) button ❹❺❾

12 SEL (control mode select) button ❺❾

13 Reset button (located on the front side of the unit hidden by the front panel) ❹

14 During radio reception:
Preset number buttons ❽❾

During CD playback:

1 INTRO (intro scan) button ❻❿

2 REPEAT (repeat play) button ❼⓬

3 SHUF (shuffle play) button ❼⓫

15 POWER SELECT switch (located on the bottom of the unit)
See "POWER SELECT Switch" in the installation/Connections manual.

16 AF/TA (alternative frequency/traffic announcement) button ❿⓫

17 CD (CD play) button ❻

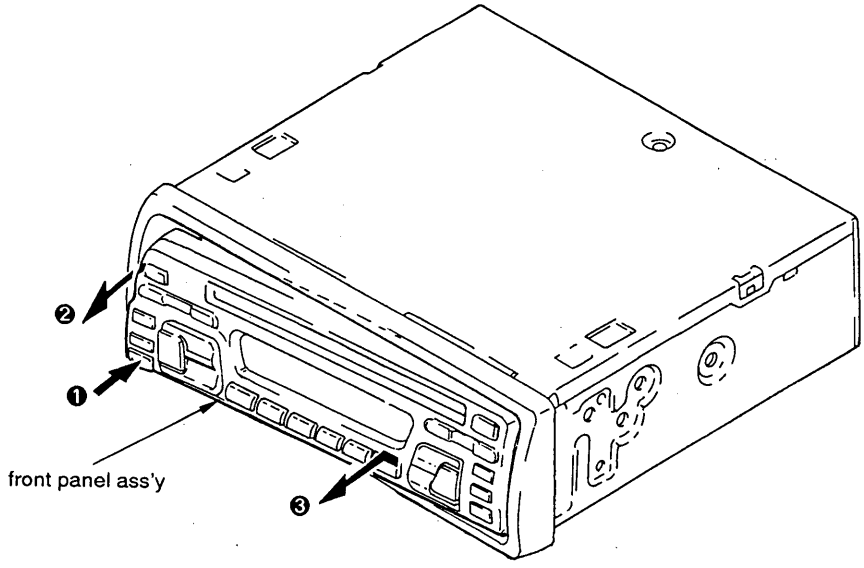
18 DSPL (display mode change/time set) button ❺❾

19 SENS/BTM (sensitivity adjust/Best Tuning Memory function) button ❼❽

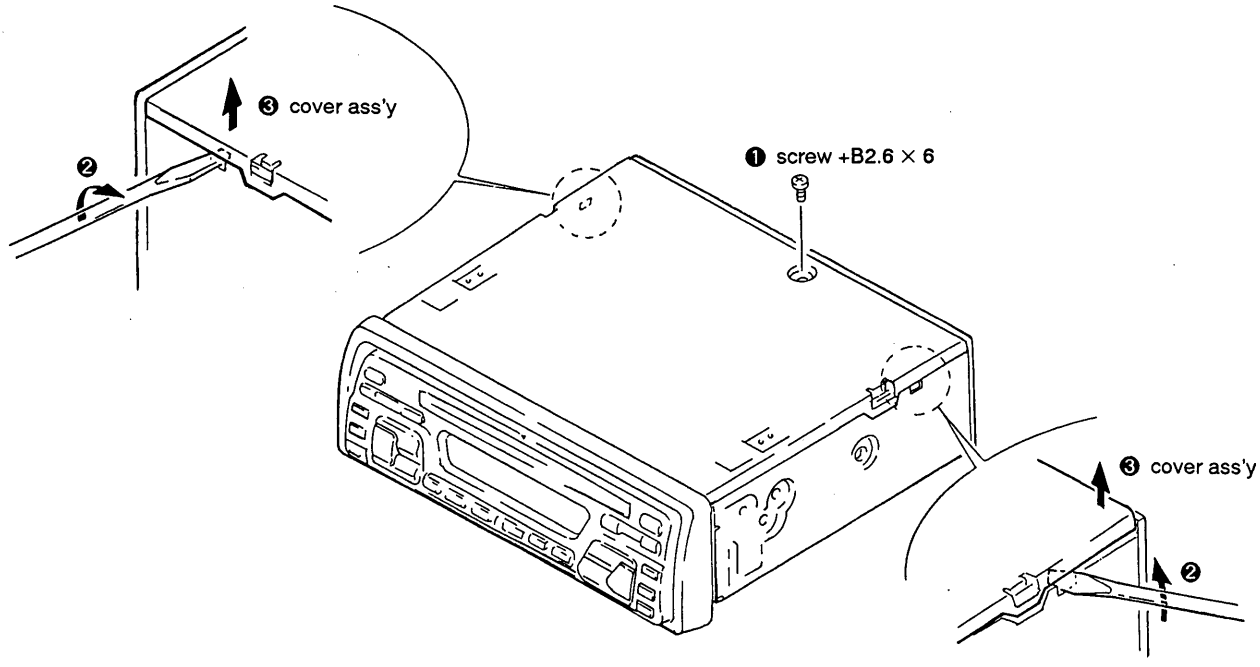
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

FRONT PANEL ASS'Y



COVER ASS'Y



SECTION 3
TEST MODE

Setting:

Method 1

Press keys in order of [4] → [5] → [1] for 2sec. under OFF condition.

Method 2

Pin ㊲ of IC701 (SYSTEM CONTROL) → Connected to GND → [RESET] button (S703).

Note: While the TEST MODE is set, the following will be displayed on the LCD.
Bit display "SHUF".

Releasing:

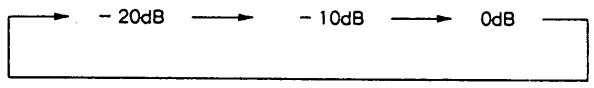
Press [OFF] key, or press [RESET] button (Open pin ㊱ of IC701).

LCD display test

All segments of the display are lit up at the beginning of test mode.

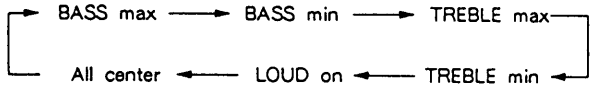
Electronic volume test

[+] key :

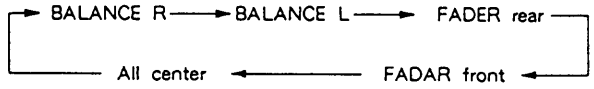


[−] key : normal operation

[SEL] key :



[MUTE] key :



CD SECTION

Audio Measurement Mode

When CD is played, the AUDIO MEASUREMENT MODE turns on.

When "YEDS-18" is played in the measuring mode, only the following Track No. will be played. (BANK function)

Each time the [4] key is pressed, the measuring mode turns on/off cyclically.

Note: AUDIO MEASUREMENT MODE PLAY Track No.
No. 2, 3, 6, 7, 8, 10, 12, 13, 17
(These have been set assuming that YEDS-18 will be used.)

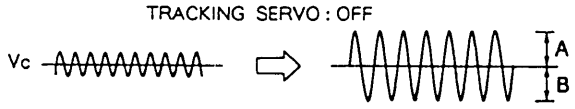
When YEDS-18 is used, the recording signals of the above tracks are as follows.

TNO	CONTENTS	EMPHASIS	PURROSE
2	1kHz Sine Wave 0dB L & R	OFF	Reference
3	20kHz Sine Wave 0dB L & R	OFF	Frequency
6	20kHz Sine Wave 0dB L & R	OFF	Modulation Noise
7	Infinity Zero −∞dB L & R	OFF	S/N
8	1kHz Sine Wave 0dB L	OFF	Channel Separation
10	1kHz Sine Wave 0dB R		
12	5kHz Sine Wave − 4.53dB L & R	ON	De emphasis
13	16kHz Sine Wave − 9.04dB L & R		
17	1kHz Sine Wave − 60dB L & R	OFF	Dynamic Range

Adjusting and Checking Functions

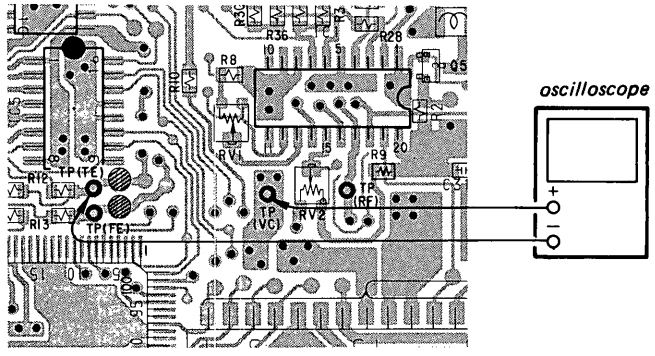
a) TRACKING OFFSET adjustment

Each time the [INTRO] key is pressed while the CD is played, the TRACKING SERVO turns on/off. The bit display "INTRO" on the LCD will be lit while the TRACKING SERVO is off.



Adjustment Location and Measurement point:

【SERVO BOARD】 (SIDE B)



Procedure:

Adjust RV1 so that the peak values of waveforms A and B become equal.

b) Focus search retry mode

Each time the REPEAT key is pressed while the CD is played, the FOCUS SEARCH RETRY MODE turns on/off.

When the FOCUS does not turn on in the FOCUS SEARCH RETRY MODE, the FOCUS search is repeated. Once the FOCUS turns on, the unit sets into the PLAY condition.

During the FOCUS SEARCH RETRY MODE, the "REP" bit display on the LCD will be lit.

Note: This mode is for checking the unit when FOCUS cannot be set.

CD Error Display

During CD PLAY in the TEST MODE, the following ERROR displays will be shown when CD errors occur.
"E- n1 n2"
n1 to n2 are determined by ERROR symptoms as shown below.

n1	n2
1 : SERVO ERROR	1 : FOCUS ERROR 2 : GFS ERROR 3 : SLED MAX TIME OVER 4 : SLED OVERRUN 5 : TOC READ ERROR
3 : LOADING /EJECT ERROR	1 : MAX TIME OVER (When sensor is passed during loading.) 2 : Loading of only 8cm CD, adaptor, etc. 3 : MAX TIME OVER (Until chucking ends during loading.) 4 : MAX TIME OVER (Until EJECT ends during ejecting.)
4 : TRACK JUMP	1 : FOCUS DOWN 2 : TRACK JUMP 3 : HANG UP
D : TEMP (HOT)	0
F : MD GIVE UP	7 : EJT

TUNER SECTION

When the tuner is turned on in the TEST MODE, all bands will first be set to f_{center}.

SEEK STOP TEST Function

a) When the AMS/SEEK+ ▶▶| key is pressed, the unit is set to a frequency − 10 steps from the f_{center} and automatically seeks up to the f_{center}.

- If the unit seek stops at the f_{center} :
  The unit sets into the f_{center} reception state. Preset No. "1" will be displayed.
- If the unit seeks up to the f_{center} and cannot seek stop :
  It returns to the − 10 step frequency and seeks up again.
- If the unit seek stops before the f_{center} :
  The unit receives that frequency. Preset No. "3" will be displayed.

b) When AMS/SEEK |◀◀ − key is pressed, the unit is set to a frequency + 10 steps from the f_{center} and automatically seeks down to the f_{center}.
Hereafter the same as the AMS/SEEK+ ▶▶| key.

c) When the PRESET+ ▶▶| key is pressed, the unit is set to a frequency − 10 steps from the f_{max} and seeks up.
Hereafter the same as a) except that f_{center} is replaced by f_{max}.

d) Press the PRESET |◀◀ − key to carry out normal Manual seach down operations.

BAND SELECT

During TEST MODE, only the single band can be selected.

AGC CUT Function

In the AM ON condition, this function activates the $\overline{SEEK}$ port (IC603) and cuts AGC.
In the AGC CUT condition, the following displays on the LCD will light up.
Bit display "BANK"

When the BTM key is pressed for more than two seconds, AGC CUT turns on/off cyclically.
(The BTM function is unavailable.)

Note: Set the AGC CUT condition when adjusting the AM SEEK STOP sensitivity.
If the band changes from FM to AM, be sure to turn on the AGC CUT.

SD Signal Display
(For adjusting SEEK STOP LEVEL)

If the SD signal becomes high while a certain frequency is being received, after BAND displays such as "FM", "AM", etc. are shown, the following displays will light up.

"3" display

When the SD signal is low, nothing will be shown after the BAND is displayed.

DESTINATION	BAND	fmin	fcenter	fmax	step(SEEK)	step(MANUAL)
AEP, G	FM	87.50MHz	98.00MHz	108.00MHz	50kHz	50kHz
	MW	531kHz	999kHz	1,602kHz	9kHz	9kHz
	LW	153kHz	216kHz	281kHz	9kHz	1kHz

Abbreviation G : German

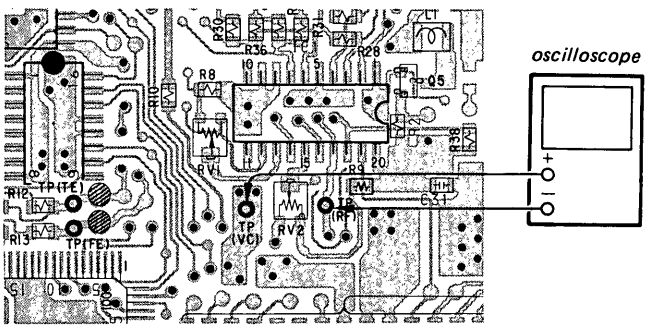
SECTION 4
ELECTRICAL ADJUSTMENTS

CD SECTION

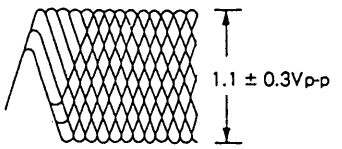
Focus Offset Adjustment

Adjustment Location and Measurement point:

【SERVO BOARD】 (SIDE B)



Volt/div : 200mV
Time/div : 0.5 µsec



Procedure:

1. Connect the oscilloscope to test point [RF] on the servo board.
2. Load a disc and set mode to PLAY.
3. Adjust RV2 so that the waveform on the oscilloscope (eye pattern) is maximum with good shape. "Well-shaped eye pattern" means that the mark "◇" is clearly distinguished at the center of the waveform.

Tracking Offset Adjustment

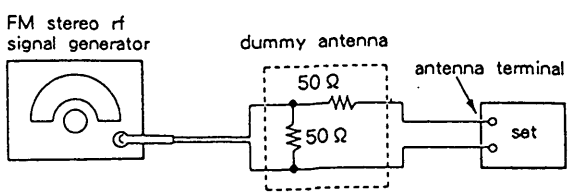
Refer to the "TEST MODE CD SECTION".

TUNER SECTION

FM Seek Stop Level Adjustment (FM SD Adjustment)

Setting:

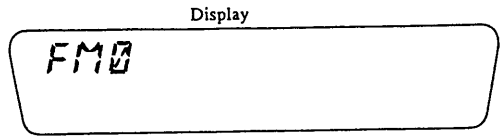
Band : FM
Frequency : 98MHz



Carrier frequency : 98MHz
Modulation : 1kHz, 75kHz
Output level : 22dB (12.6 µ V)

Procedure:

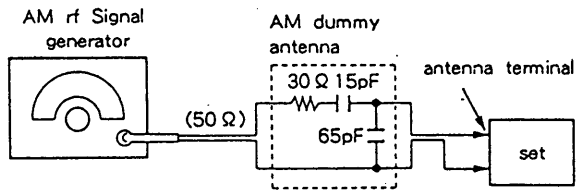
1. Set to the test mode.
2. Push the [TUNER] button and set to FM.
3. Push the [3] button.
4. Adjust RV3 on tuner unit so that the "FM" indication turns to "FM0" indication on the display window.
   But in case of already indicated "FM0", turn the RV3 so that put out light "0" indication and adjustment.



AM Seek Stop Level Adjustment (AM SD Adjustment)

Setting:

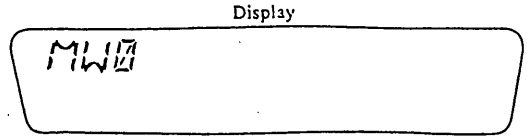
Band : AM (MW)
Frequency : 999kHz



Carrier frequency : 999kHz
Modulation : 400Hz 30 %
Output level : 33dB (44.7 µ V)

Procedure:

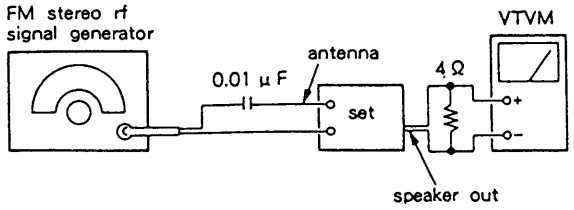
1. Set to the test mode.
2. Push the [TUNER] button and set to MW.
3. Push the [3] button.
4. Adjust RV1 on tuner unit so that the "MW" indication turns to "MW0" indication on the display window.
   But in case of already indicated "MW0", turn the RV1 so that put out light "0" indication and adjustment.



FM Stereo Separation Adjustment

Setting:

BAND : FM Stereo
Frequency : 98MHz



Carrier frequency : 98MHz
Modulation : Main channel : 1kHz, 33.75kHz deviation (45 %)
Pilot signal : 19kHz, 7.5kH deviation (10 %)
Sub channel : 1kHz, 33.75kHz deviation (45 %)
Output level : 1mV (More than 35dB)

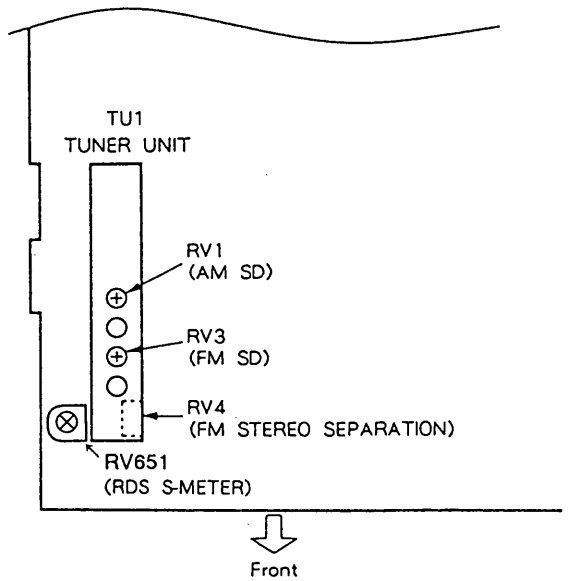
Procedure:

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	ⓐ
R-CH	L-CH	ⓑ Adjust RV4 for minimum reading.
R-CH	R-CH	ⓒ
L-CH	R-CH	ⓓ Adjust RV4 for minimum reading.

Note: The separation values in the two channels should be identical.
ⓐ − ⓑ = ⓒ − ⓓ

Adjustment Location:

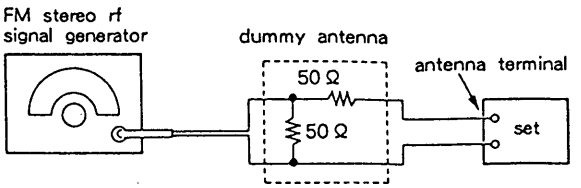
【MAIN BOARD】 (COMPONENT SIDE)



RDS S-METER Adjustment

Setting:

Band : FM
Frequency : 98MHz



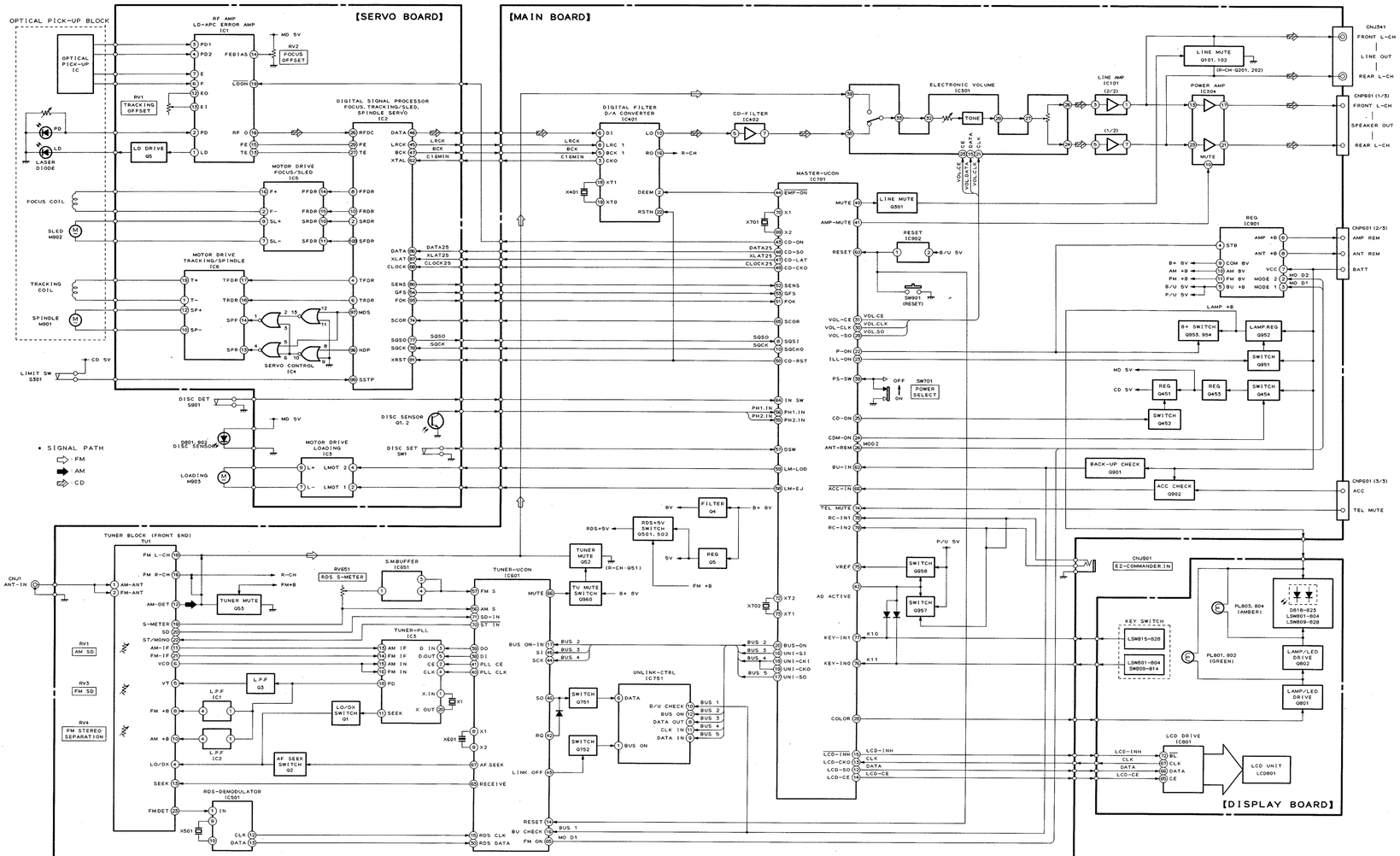
Carrier frequency : 98MHz
Modulation : no-modulation
Output level : 35dBμ (56.2μV)

Procedure:

1. Set to the test mode.
2. Push the [TUNER] button.
3. Push the [3] button.
4. Adjust RV651 so that the voltage value of IC601 ㊼ pin is 1.6 ± 0.1 Vdc.

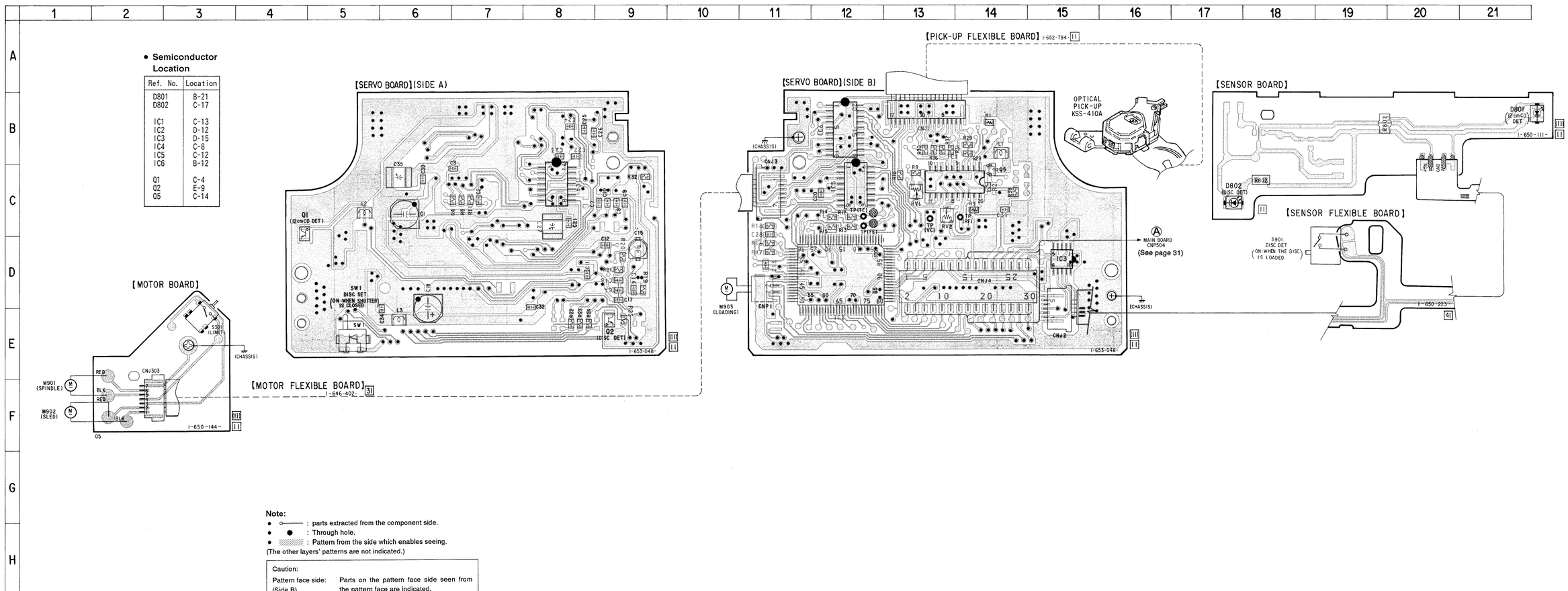
SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM



5-2. PRINTED WIRING BOARDS – MECHANISM DECK Section –

• See page 32 for Semiconductor Lead Layouts.



Note:

- ○——— : parts extracted from the component side.
- ● : Through hole.
- ▨ : Pattern from the side which enables seeing.

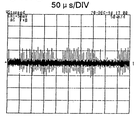
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

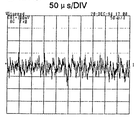
• Waveforms

Servo Board

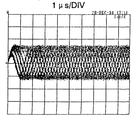
❶ IC1 ⑮ 50mV/DIV 50 μ s/DIV



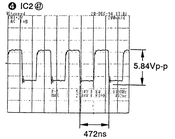
❷ IC1 ⑭ 100mV/DIV 50 μ s/DIV



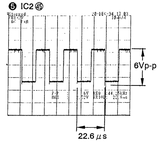
❸ IC1 ⑰ 0.5V/DIV 1 μ s/DIV



❹ IC2 ㉒

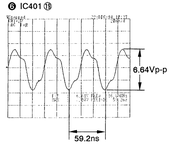


❺ IC2 ㉖

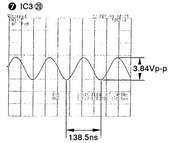


Main Board

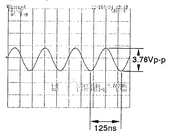
❻ IC401 ⑲



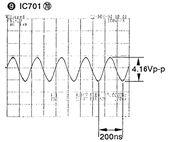
❼ IC3 ㉚



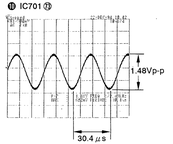
❽ IC801 ⑧



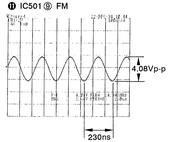
❽ IC701 ⑮



❿ IC701 ⑰

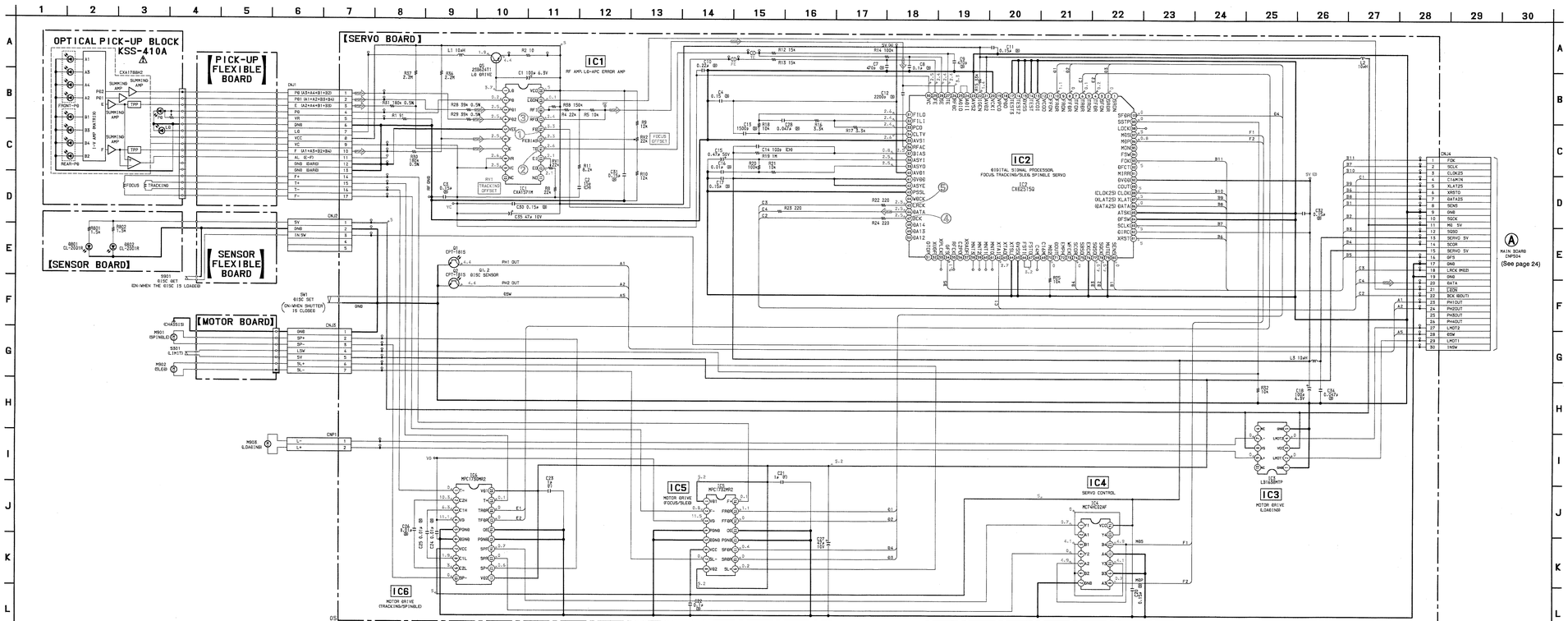


⓫ IC501 ⑧ FM



5-3. SCHEMATIC DIAGRAM – MECHANISM DECK Section –

• See page 41 for IC Block Diagrams.



Note:

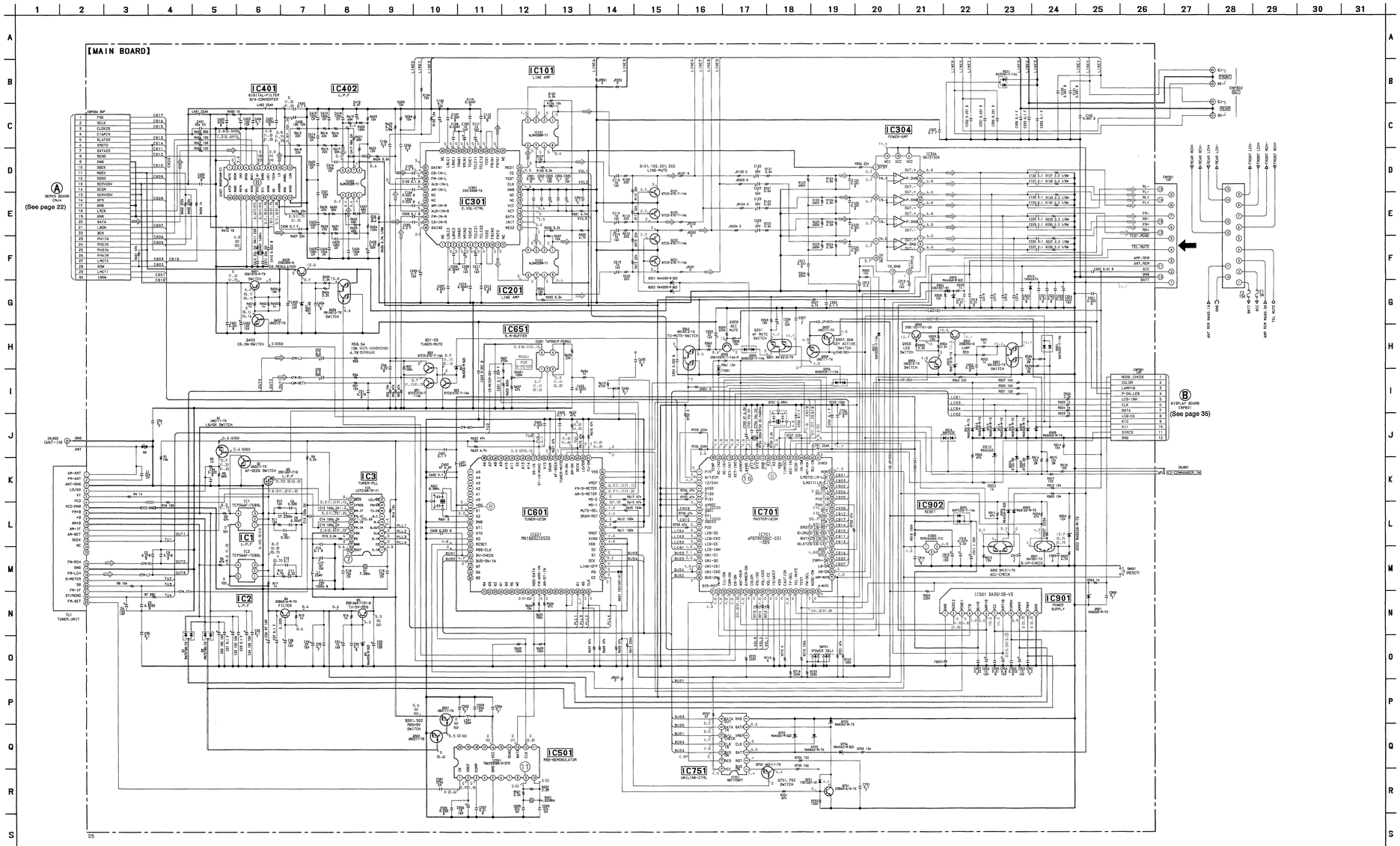
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▭▭▭▭ : B ÷ Line.
- ▭▭▭ : adjustment for repair.
- Power voltage is dc 14.4 V and fed with regulated dc power supply from BATT and ACC terminals.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : CD
- Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

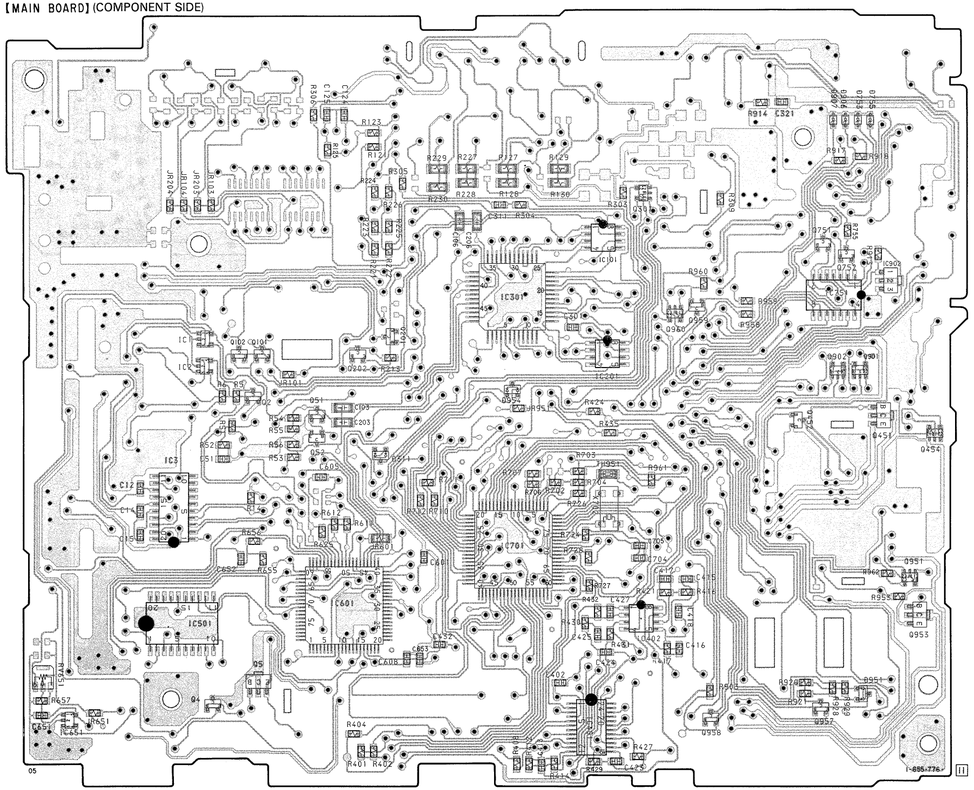
5-4. SCHEMATIC DIAGRAM – MAIN Section –

• See page 42 for IC Block Diagrams and page 19 for Waveforms.

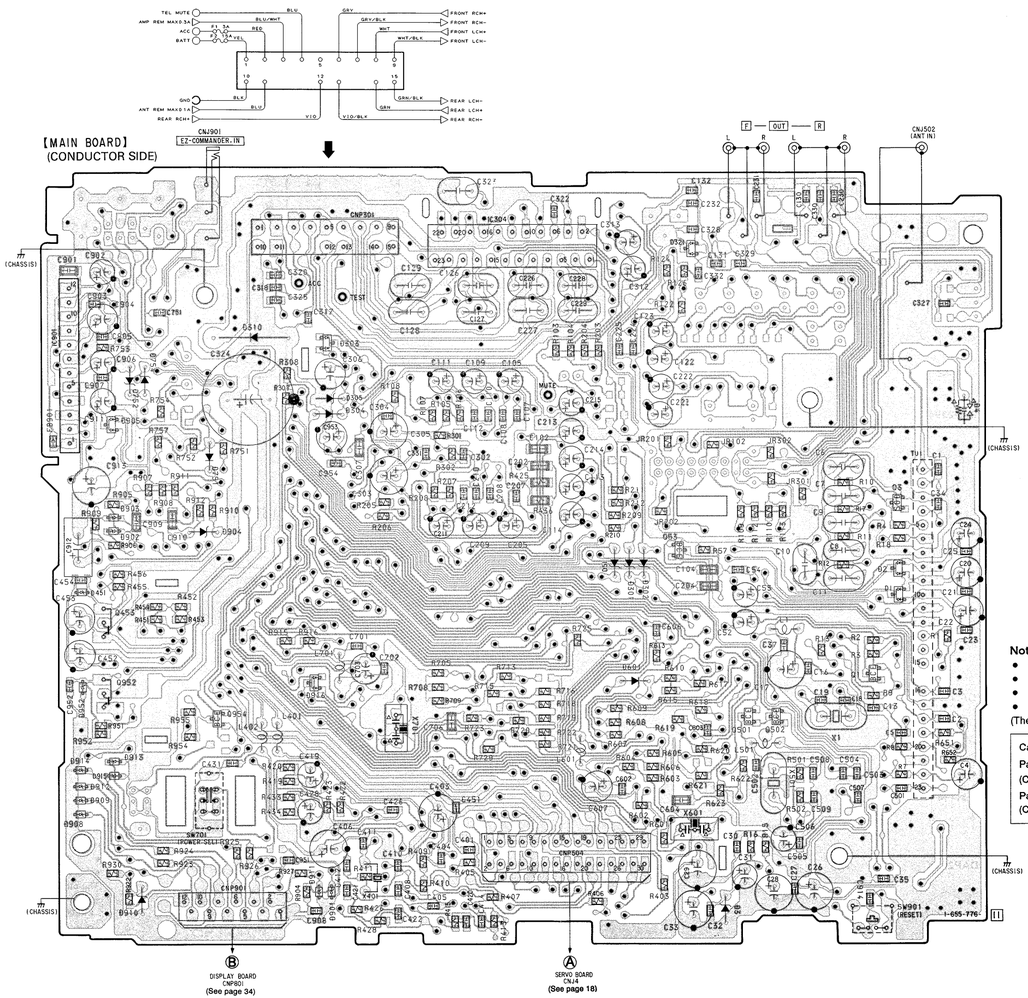


5-5. PRINTED WIRING BOARD – MAIN Section – • See page 32 for Semiconductor Lead Layouts.

【MAIN BOARD】(COMPONENT SIDE)



【MAIN BOARD】(CONDUCTOR SIDE)



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D1	G-21	IC201	F-7
D2	G-21	IC301	E-6
D3	J-19	IC304	C-17
D4	E-22	IC401	J-7
D51	G-18	IC402	I-8
D301	G-18	IC501	I-2
D302	G-19	IC601	I-4
D303	D-15	IC651	J-1
D304	E-15	IC701	H-6
D305	E-15	IC751	E-10
D310	D-14	IC901	D-12
D311	G-5	IC902	E-10
D321	C-19		
D451	G-12	Q1	H-21
D601	H-18	Q2	G-3
D751	F-14	Q3	F-21
D752	E-13	Q4	J-3
D753	C-10	Q5	J-3
D754	E-13	Q51	G-4
D755	C-10	Q52	G-4
D901	J-15	Q53	F-19
D902	F-13	Q101	F-3
D903	F-13	Q102	F-3
D904	F-14	Q201	F-5
D905	E-13	Q202	F-4
D906	C-10	Q301	D-7
D907	C-10	Q451	G-10
D908	I-12	Q452	G-9
D909	I-12	Q453	G-13
D910	J-13	Q454	G-11
D911	J-15	Q501	H-20
D912	I-12	Q502	H-20
D913	I-13	Q751	E-9
D914	I-12	Q752	E-10
D915	I-13	Q901	F-10
D916	H-15	Q902	F-10
D951	J-10	Q951	H-10
D952	H-12	Q952	H-13
D954	F-6	Q953	I-10
		Q954	F-14
IC1	F-3	Q957	J-9
IC2	F-3	Q958	J-8
IC3	G-2	Q959	F-8
IC101	E-7	Q960	F-8

Note:
- ○——— : parts extracted from the component side.
- ● : Through hole.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:

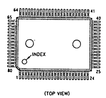
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

• Semiconductor Lead Layouts

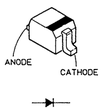
BA3910B-V3

MN1883220SZG

TC9240F
μPD78058GC-031-3B9



DTZ6.8B
MA110



CL-155Y/PG-CD

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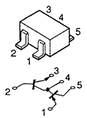
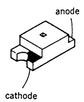
MPC1730MR2
TDA7330BD-013TR

MPC1732MR2

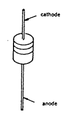
XN1A312-TX



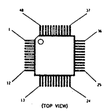
CL200IR-X-TU



MA4039 (QZ)
MA4056-M (QZ)
MA4062-M (QZ)
MA4160-M (QZ)
RD6.8ES-B2



CXA1646Q



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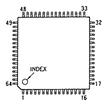

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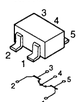
XN1501



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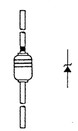

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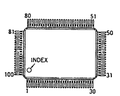

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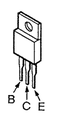
2SD2394-G



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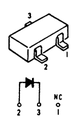

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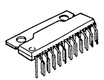

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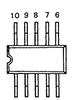
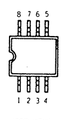
SN74HC02ANS

2SK1657-T1B

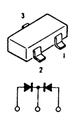
LB1638M



μPC4558G2



DAN202K



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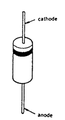
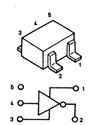


LC7216M

TA75S01F (TE85L)



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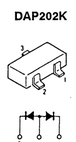
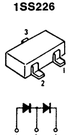


1SS226

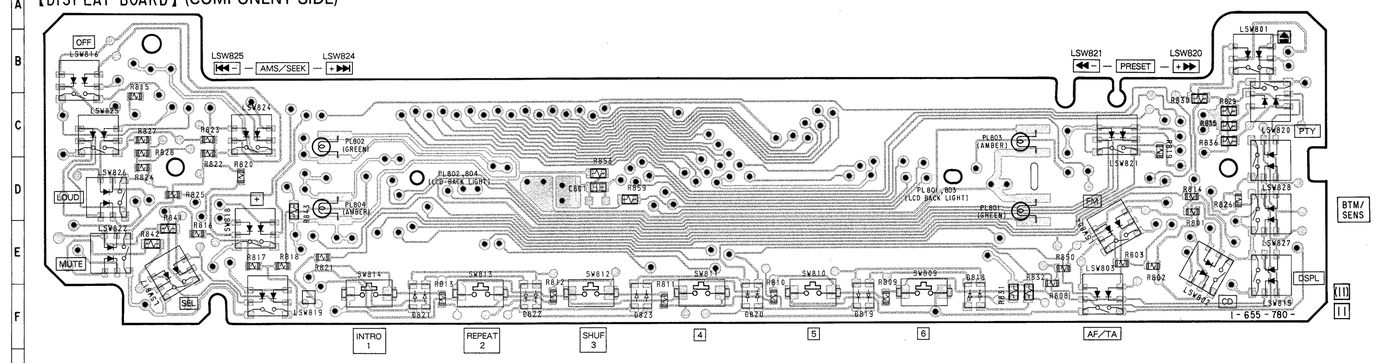


5-6. PRINTED WIRING BOARD – DISPLAY Section –

• **Semiconductor Location**

Ref. No.	Location
D801	K-4
D818	F-16
D819	F-14
D820	F-12
D821	F-7
D822	F-9
D823	F-10
IC801	I-11
Q801	J-4
Q802	J-5

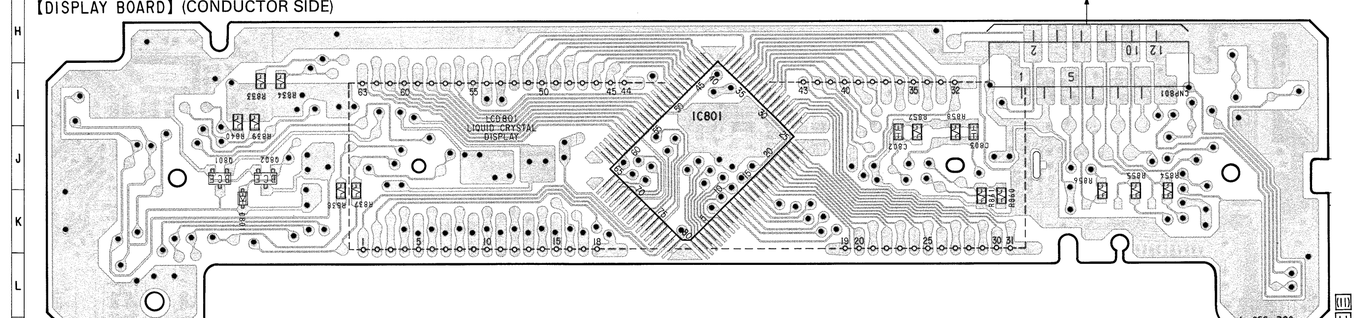
【DISPLAY BOARD】(COMPONENT SIDE)



Ⓑ (See page 30)

MAIN BOARD CNP901

【DISPLAY BOARD】(CONDUCTOR SIDE)

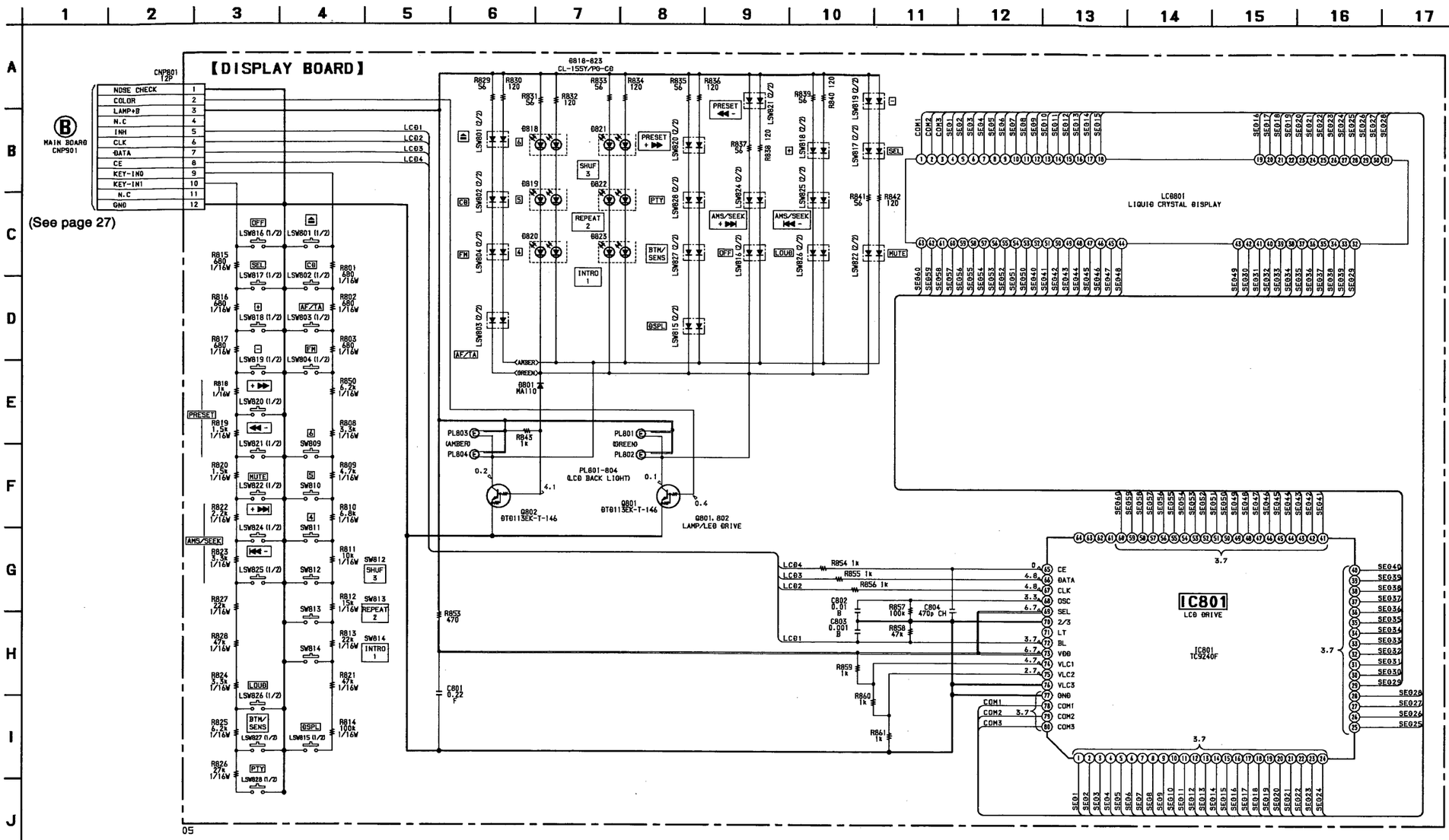


Note:
- ○——: parts extracted from the component side.
- ●: Through hole.
- ▨: Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

5-7. SCHEMATIC DIAGRAM – DISPLAY Section –



Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼ W or less unless otherwise specified.
- ○ ▭ : B + Line.
- ● ▭ : panel designation.
- ○ Power voltage is dc 14.4 V and fed with regulated dc power supply from ACC and BACK UP cords.
- ○ Voltages are dc with respect to ground under no-signal (detuned) conditions.
  in playback mode.
  no mark : FM
- ○ Voltages are taken with a VOM (10 MΩ/V).
  Voltage variations may be noted due to normal production tolerances.

5-8. IC PIN DESCRIPTION

• IC601 TUNER CONTROL (MN1883220SZG)

Pin No.	Pin Name	I/O	Description
1	A5	O	S-RAM ADDRESS control output. Not used.
2	A4		
3	A3		
4	A2		
5	A1		
6	A0		
7	VDD	—	Power supply pin.
8	X1	—	Connecting pins of the ceramic oscillator.
9	X2	—	
10	GND	—	
11	XTI	—	Not used.
12	XTO	—	
13	XO	—	Connected to GND.
14	$\overline{\text{RESET}}$	I	Reset input pin.
15	RDS CLK	I	RDS CLK input pin.
16	BU CHECK	I	BACK-UP detection.
17	BUS ON	I	BUS INTERFACE ON/OFF detection.
18	D7	I/O	S-RAM DATA BUS. Not used.
19	D6		
20	D5		
21	D4		
22	D3		
23	D2		
24	D1		
25	D0		
26	RE	O	S-RAM READ ENABLE output. Not used.
27	WE	O	S-RAM WRIGHT ENABLE output. Not used.
28	—	—	Not used.
29	—	—	
30	RDS DATA	I	RDS DATA input.
31	FM AMS IN	I	Not used.
32	AM ST IN	I	Not used.
33	—	—	Not used.
34	—	—	
35	—	—	
36	—	—	Connected to GND.
37	—	—	
38	PLL DI	I	PLL DATA input.
39	PLL DO	O	PLL DATA output.
40	PLL CLK	O	PLL CLK output.

Pin No.	Pin Name	I/O	Description
41	PLL CE	O	PLL CE output.
42	RQ	O	BUS REQUEST output.
43	LINK OFF	O	Not used.
44	SCK	I	BUS INTERFACE CLK input.
45	SI	I	BUS INTERFACE DATA input.
46	SO	O	BUS INTERFACE DATA output.
47	VDD	—	Power supply pin.
48	AVDD	—	power supply pin. (For A/D conversion ports.)
49	VREF+	I	Reference voltage input pin.
50	—	—	Connected to GND.
51	—		
52	SRAM RST	I	Reset signal input.
53	MUTE SEL	I	Mute selecting signal input.
54	MS1	I	Mode select input.
55	MS2	I	
56	AM S METER	I	S-METER voltage detection input. AM (MW : SW : LW)/FM
57	FM S METER	I	
58	VREF –	I	Connected to GND.
59	—	—	Connected to GND.
60	VSS	—	
61	TU ON	O	Not used.
62	$\overline{DX}$/LO	O	Not used.
63	SEEK	O	SEEK OUT output.
64	AM ON	O	Not used.
65	FM ON	O	FM ON output.
66	TUNER MUTE	O	MUTE output.
67	AF SEEK	O	AF SEEK OUT output.
68	SRAM	O	External S-RAM control output. Not used.
69	A15	O	Not used.
70	ST IN MONO	I	Stereo input pin.
71	SD IN	I	SD input pin.
72	A14	O	Not used.
73	A13	O	
74	CE	O	S-RAM CE output. Notused.
75	A11	O	Not used.
76	A10		
77	A9		
78	A8		
79	A7		
80	A6		

• IC701 SYSTEM CONTROL (μPD78058GC-031-3B9)

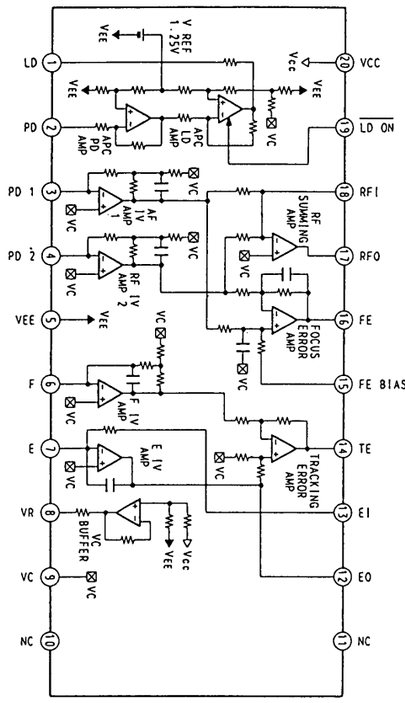
Pin No.	Pin Name	I/O	Description
1	N.C	—	Not used.
2	8/12CM	I	Mechanism deck is for 12 cm disc only or not. "L" : 12 cm only "H" : 8/12 cm compatible
3	12/24H	I	12 hours or 24 hours system select. "L" : 12 hours "H" : 24 hours
4	AVSS	—	Connected to GND.
5	N.C	—	Not used.
6	N.C	—	Not used.
7	AVREFI	—	GND.
8	SQSI	I	CD Q data input pin.
9	N.C	—	Not used.
10	SQCKO	O	CLOCK output pin for reading the Q DATA.
11	N.C	—	Not used.
12	LCD SO	O	LCD serial data output.
13	LCD CKO	O	LCD serial clock output.
14	LCD CE	O	Pin which outputs CE to the LCD driver IC.
15	LCD INH	O	Pin which outputs INH to the LCD driver IC.
16	UNI SI	I	Serial data input. (UNILINK)
17	UNI SO	O	Serial data output. (UNILINK)
18	UNI CKI	I	Serial clock input. (UNILINK)
19	UNI CKO	O	Serial clock output. (UNILINK)
20	BUS ON	O	BUS ON control. "L": UNILINK communication is active
21	SYS RST	O	System reset control. "L" is out on reset slave microcomputer for UNILINK.
22	PW ON	O	ON/OFF control pin of the system power supply. "H" : ON
23	ILL ON	O	Illumination power supply control output pin. "H" : ON
24	CDM ON	O	Power supply ON/OFF control output pin. (Mechanism deck section)
25	CD ON	O	Power supply ON/OFF control output pin. (CD servo IC)
26	ANT REM	O	Antenna remote control.
27	N.C	—	Not used.
28	COLOR	O	Output pin for switching lighting colors. (AMBER/GREEN)
29	VOL SO	O	Electronic volume serial data output.
30	VOL CKO	O	Electronic volume serial clock output.
31	VOL CE	O	Chip enable output pin to the electronic VOL IC.
32	6/10KEY	I	6 keys/10 keys select. "L" : 6 key, "H" : 10 key
33	VSS	—	Connected to GND.
34	CAUTION	I	Alarm function is built in or not select. "L" : Built in
35	TV SEL	I	Having TV control function or TV button or not. "L" : Having TV "H" : None
36	TEL MUTE	I	Telephone MUTE input pin.
37	TEST	I	When dropped to "L", TEST MODE will be set.
38	PW SEL	I	Power select SW input pin.
39	NOSE SW	I	Front panel Ass'y removal and attaching detection. "L" : Attached
40	A MUT	O	Audio MUTE output pin. "H" : Mute

Pin No.	Pin Name	I/O	Description
41	AMP MUTE	O	MUTE output pin for power amp IC.
42	AD ON	O	VREF control pin of A/D conversion pins.
43	LD ON	O	CD servo system power supply control.
44	$\overline{\text{EMPH ON}}$	O	Outputs "L" when a DISC which has been pre-emphasized is played back.
45	SCLK	O	SERIAL CLOCK output pin.
46	BEEP	O	Alarm drive output pin.
47	CD LAT	O	SERIAL DATA LATCH output pin for the CD servo IC.
48	CD SO	O	SERIAL DATA output pin for the CD servo IC.
49	CD CKO	O	SERIAL CLOCK output pin for the CD servo IC.
50	CD RST	O	CD servo IC resetting output pin.
51	FOK	I	FOK input pin from CD servo IC.
52	SENS	I	SENS input pin from CD servo IC.
53	GFS	I	GFS input pin form CD servo IC.
54	N.C	—	Not used.
55	PH2	I	Mechanism deck sensor (loading/eject) input pin.
56	PH1	I	Mechanism deck sensor (loading/eject) input pin.
57	DSW	I	Mechanism deck sensor input pin. Detects the completion of the DISC chucking operation.
58	LM EJ	O	Loading motor control output pin. (Eject direction)
59	LM LOD	O	Loading motor control output pin. (Loading direction)
60	RESET	I	Input pin for system reset. "L" : Reset
61	SIRCS	I	SIRCS signal input pin.
62	BU IN	I	BATT line ON/OFF detection.
63	KEY ACK	I	Key input acknowledage.
64	IN SW	I	IN SW on mechanism deck input.
65	SCOR	I	SCOR input pin.
66	ACC IN	I	ACC line ON/OFF detection. "L" : ACC ON
67	TMPOL	I	Input port for Debug of microcomputer.
68	VDD	I	Power supply input. (5 V)
69	X2	—	The SYSTEM CLOCK (5 MHz) for system control IC.
70	X1	—	
71	GND	—	GND for microcomputer.
72	XT2	—	Connected to sub-crystal oscillator. (32 kHz)
73	XT3	—	
74	AVDD	I	Power supply input. (5 V)
75	AVREF0	I	Reference voltage input pin of A/D conversion pins.
76	KEY IN0	I	Key input pin. (A/D conversion input.)
77	KEY IN1	I	Key input pin (A/D conversion input)
78	RC IN1	I	Rotary commander shift key input.
79	RC IN2	I	Rotay commander shift key input.
80	TEMP	I	Thermistor voltage for temperature detection input.

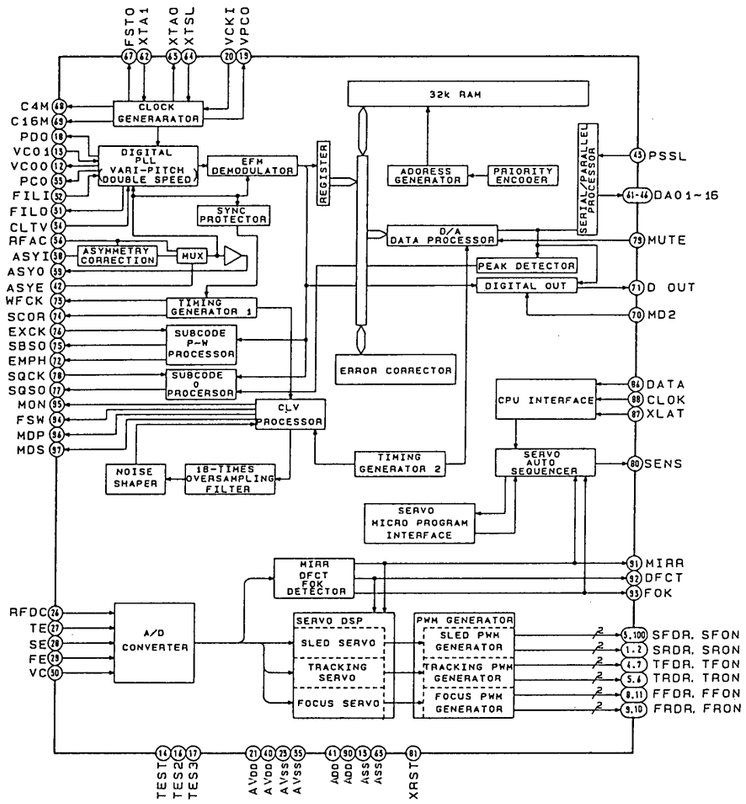
• IC Block Diagrams

– SERVO BOARD –

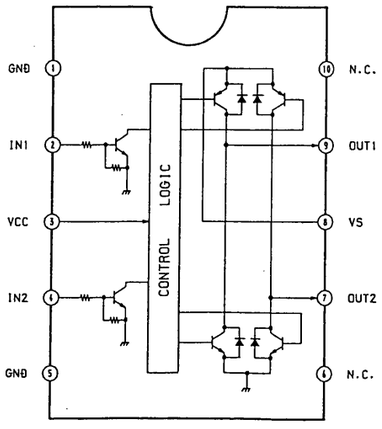
IC1 CXA1571M



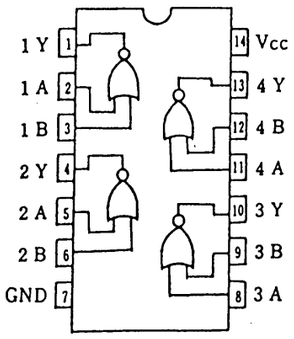
IC2 CXD2515Q



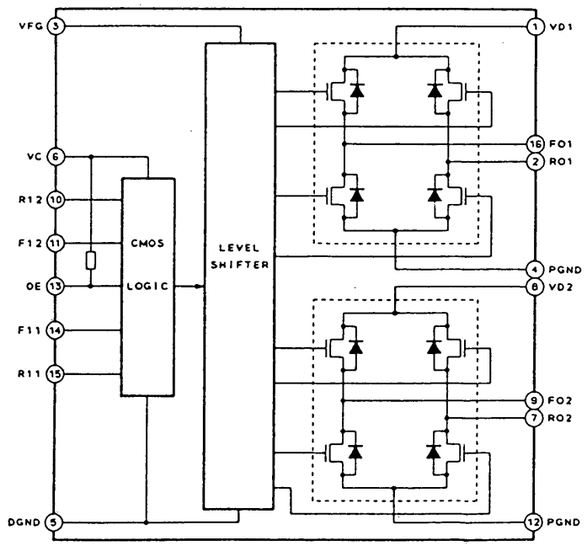
IC3 LB1638M



IC4 SN74HC02ANS

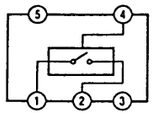


IC5 MPC1732MR2
IC6 MPC1730MR2

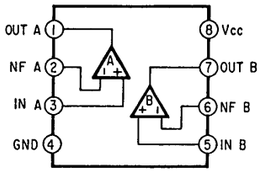


– MAIN BOARD –

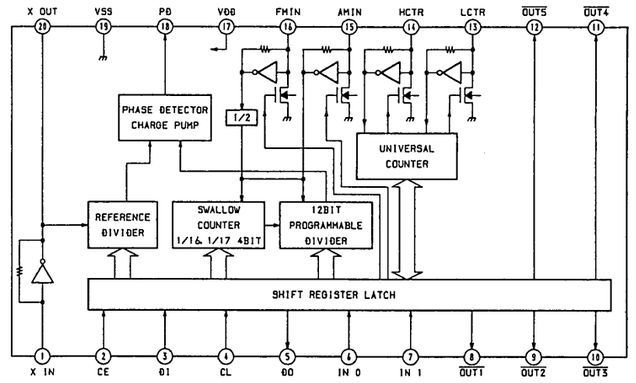
IC1, IC2 TC7S66F



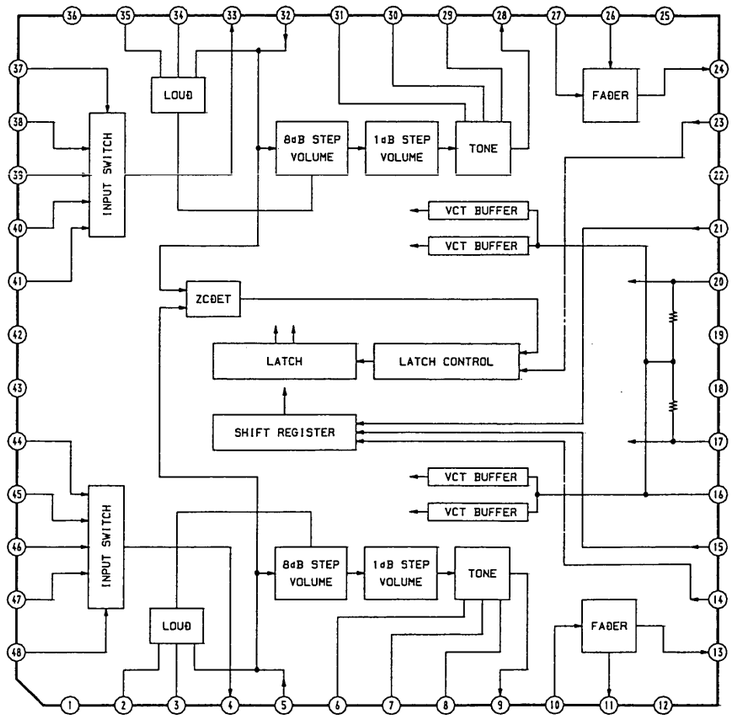
IC101, IC201, IC402 μPC4558G2



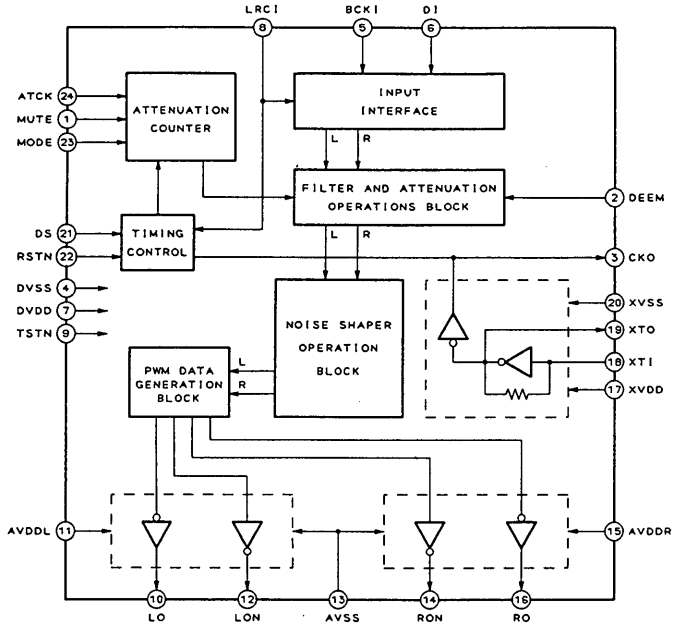
IC3 LC7216M



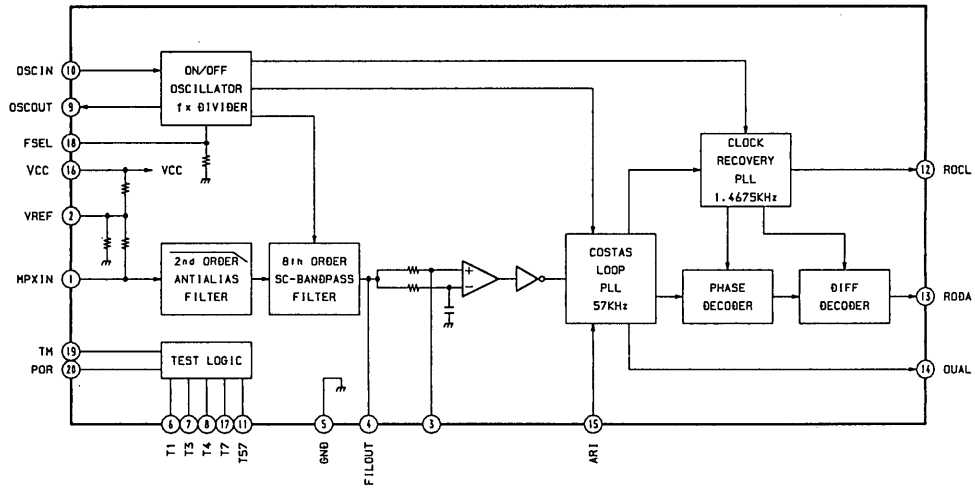
IC301 CXA1646Q



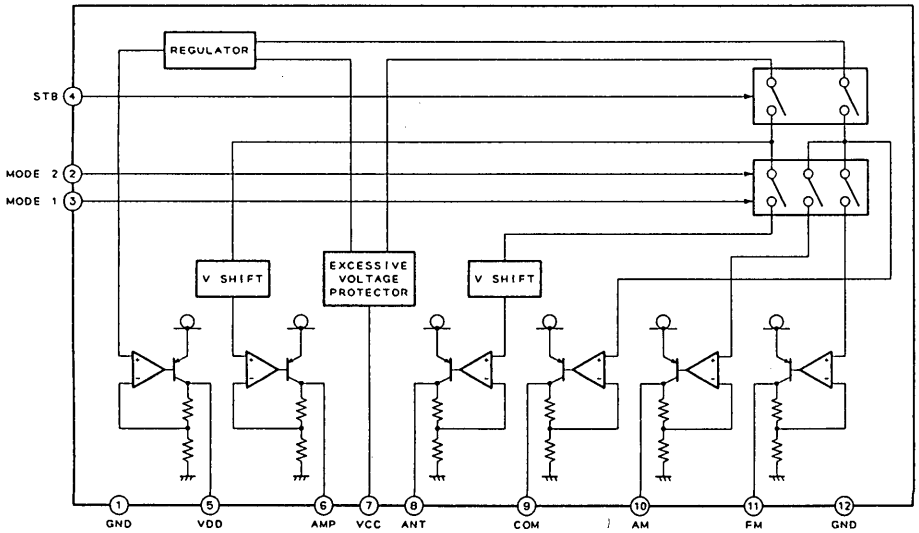
IC401 SM5874AM-ET



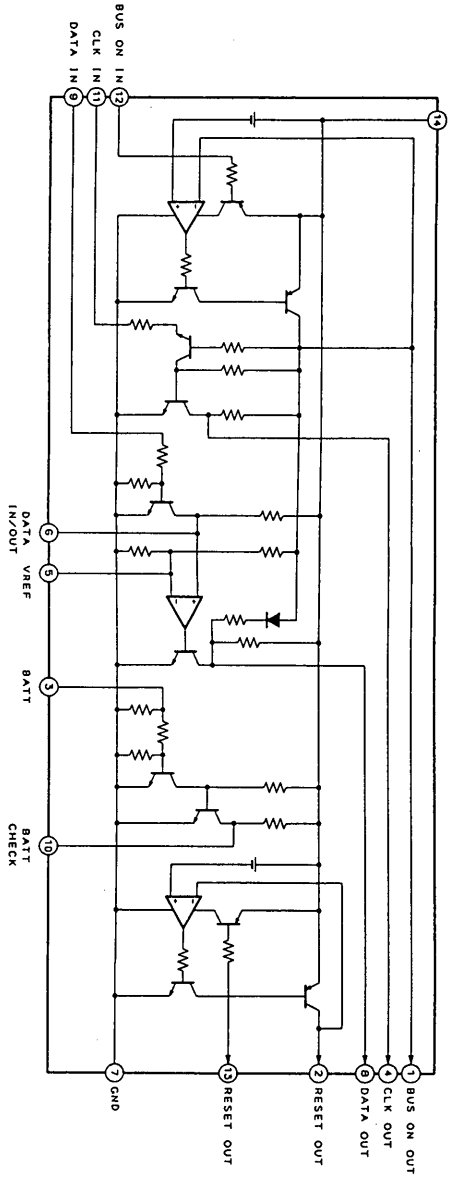
IC501 TDA7330BD-013TR



IC901 BA3910B-V3



IC751 MM1175XFF



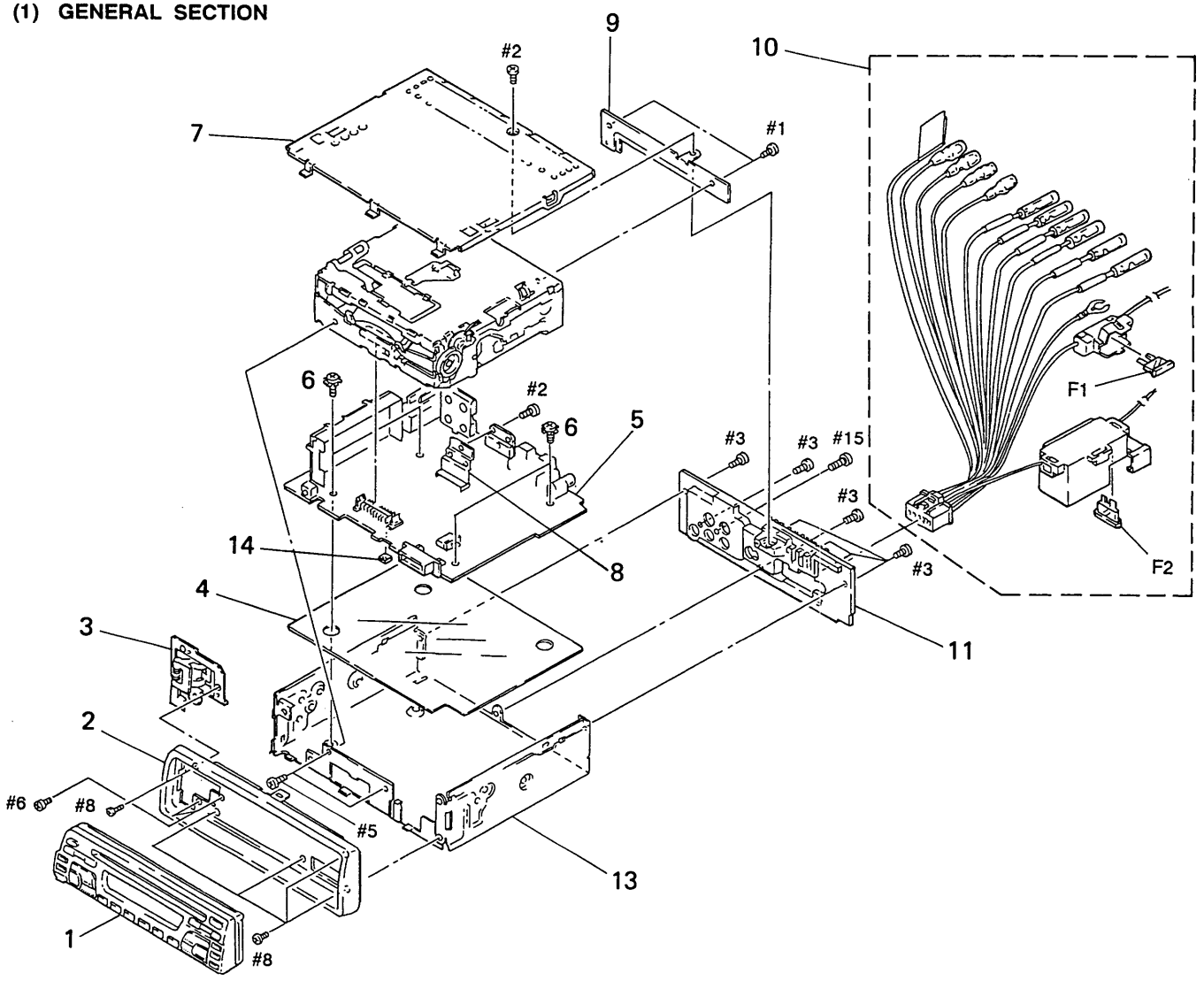
SECTION 6
EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

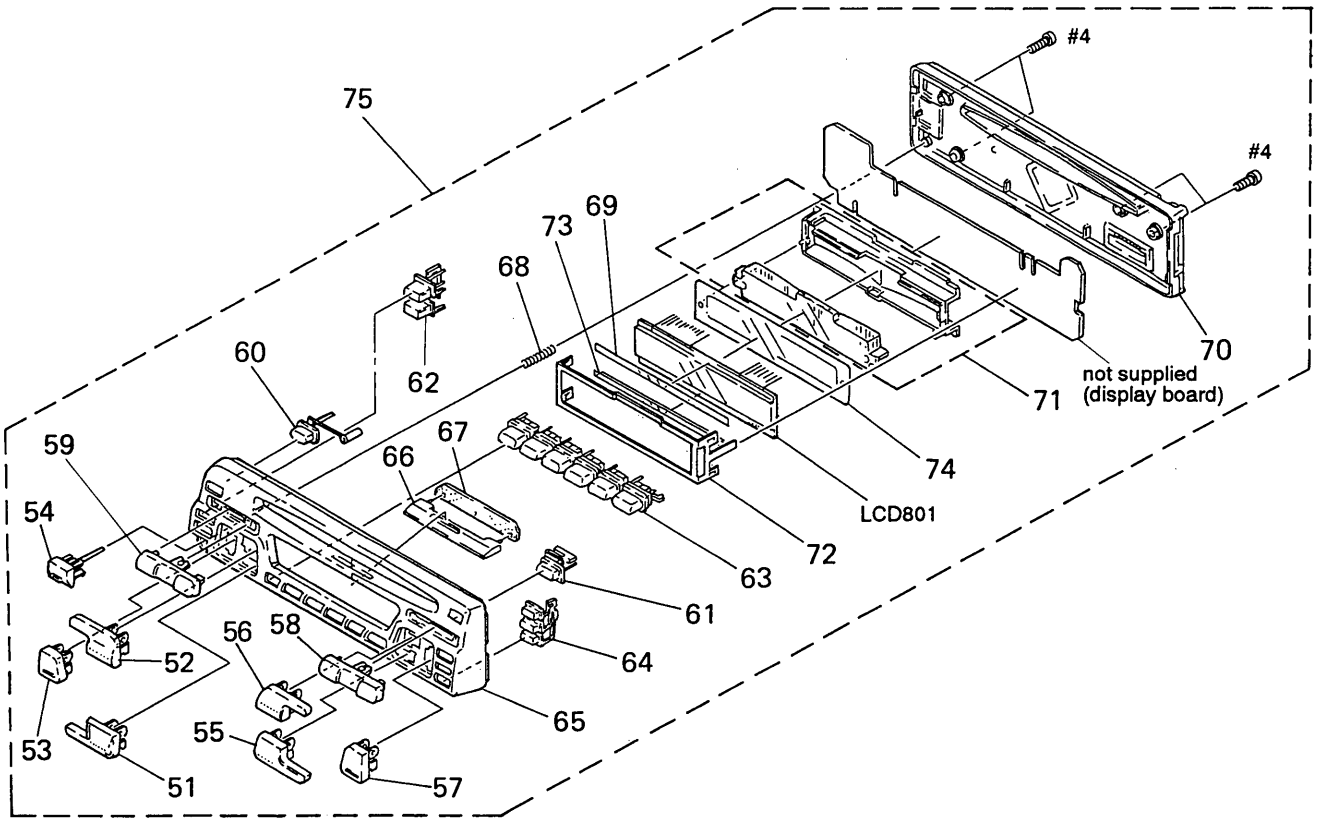
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) GENERAL SECTION



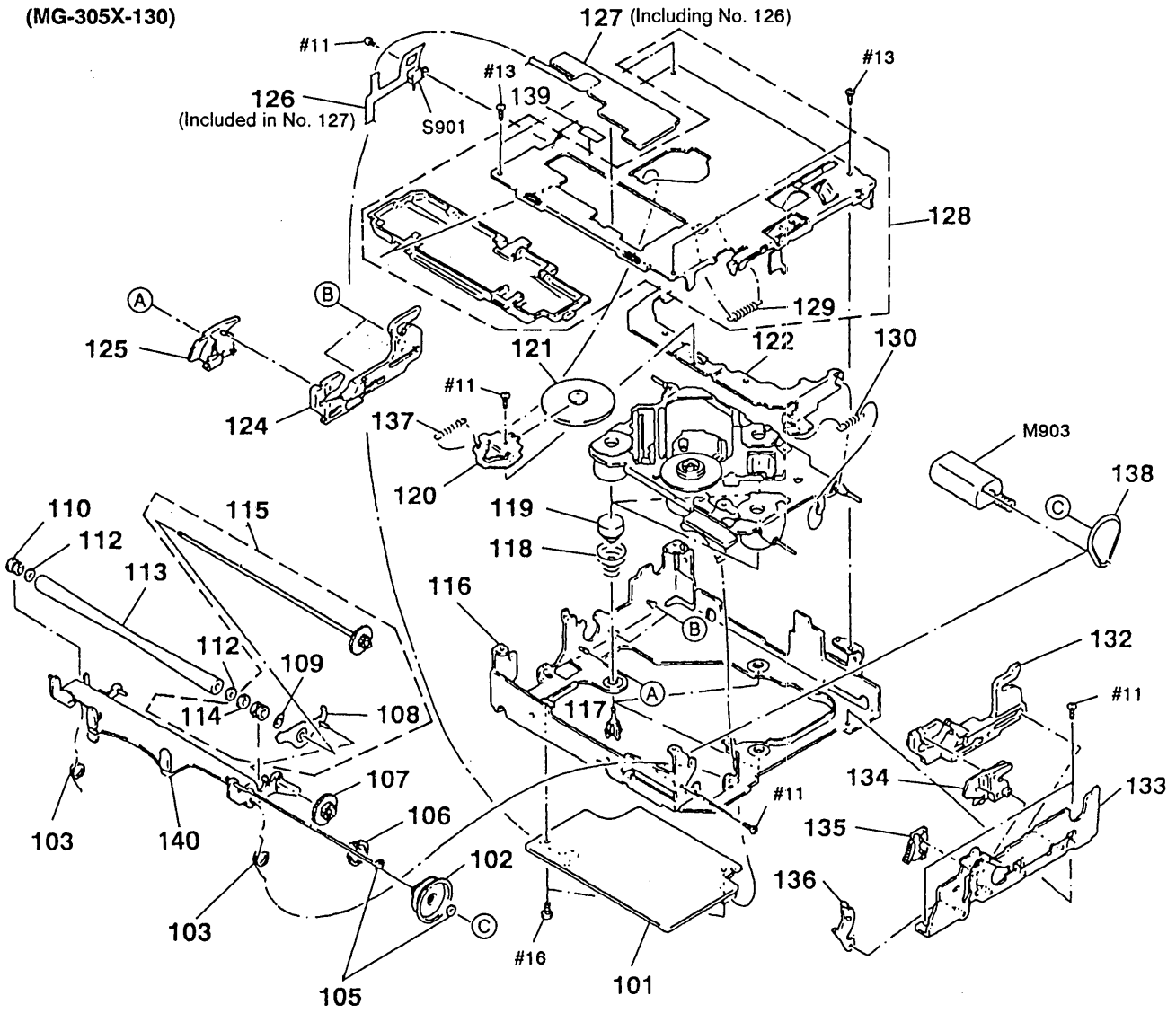
Ref. No.	Part No.	Description	Remark
1	A-3291-333-A	PANEL ASSY, FRONT	
2	X-3369-914-1	PANEL SUB ASSY	
3	X-3367-636-1	LOCK ASSY	
* 4	3-921-921-01	SHEET, INSULATING	
* 5	A-3222-885-A	MAIN BOARD, COMPLETE (AEP, Hong Kong)	
* 5	A-3222-887-A	MAIN BOARD, COMPLETE (German)	
6	3-915-923-01	SCREW, GROUND POINT	
* 7	X-3369-912-1	COVER ASSY	
* 8	3-921-888-01	BRACKET (IC)	
* 9	3-909-336-01	BRACKET (MD)	
10	1-765-081-11	CORD (WITH CONNECTOR)	
* 11	3-921-923-11	HEAT SINK	
* 13	3-921-920-01	CHASSIS (MAIN)	
14	9-911-844-XX	SPACER, MOTOR	
F1	1-533-326-11	FUSE (BLADE TYPE) (AUTO FUSE) 3A	
F2	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) 15A	

(2) FRONT PANEL SECTION



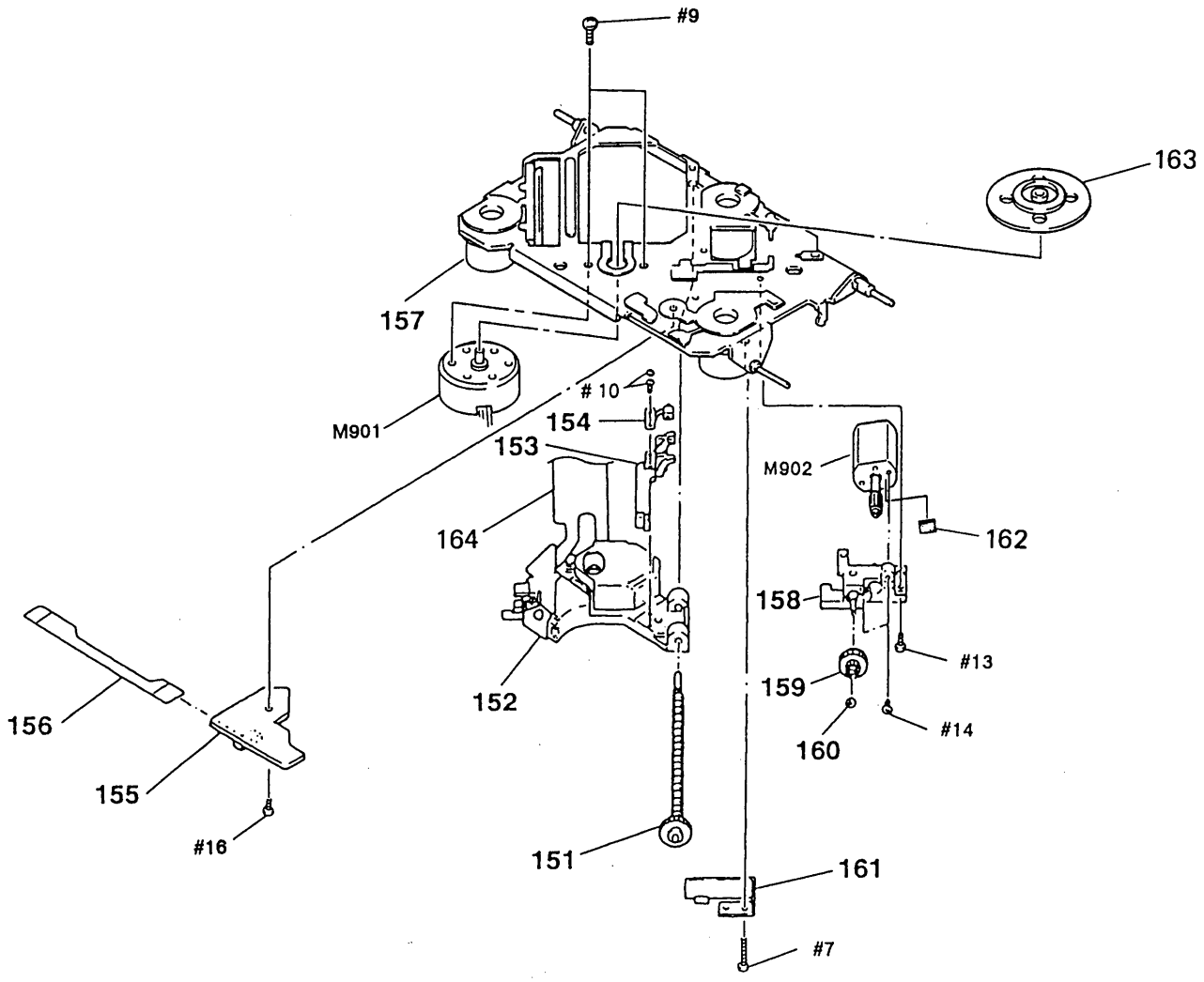
Ref. No.	Part No.	Description	Remark
51	3-921-911-01	BUTTON (-)	
52	3-921-910-01	BUTTON (+)	
53	3-921-902-01	BUTTON (SEL)	
54	3-921-900-01	BUTTON (RELEASE)	
55	3-921-909-31	BUTTON (AM) (AF/TA)	
56	3-921-915-11	BUTTON (FM)	
57	3-921-916-01	BUTTON (CD. TAPE) (CD)	
58	3-921-914-01	BUTTON (PRE) (PRESET)	
59	3-921-913-01	BUTTON (AMS) (AMS/SEEK)	
60	3-921-904-01	BUTTON (OFF)	
61	3-921-905-01	BUTTON (EJECT) (⏏)	
62	3-921-903-01	BUTTON (2 GANG) (LOUD/MUTE)	
63	3-921-899-01	BUTTON (6 KEY) (1/2/3/4/5/6)	
64	3-921-898-31	BUTTON (3 GANG) (PTY/SENS/DSPL)	
65	3-921-918-31	PANEL, FRONT	
66	3-921-901-01	PLATE (CD), LIGHT GUIDE	
67	3-909-313-01	SHEET (DOOR F)	
68	3-914-590-01	SPRING (R2)	
* 69	3-921-919-01	SHEET (LCD)	
70	3-921-924-01	PANEL, FRONT BACK	
* 71	X-3369-913-1	HOLDER (LCD) ASSY	
* 72	3-921-908-01	PLATE (LCD), GROUND	
73	3-922-944-01	SHEET (LCD D)	
* 74	3-921-922-01	SHEET (DIFFUSION)	
* 75	A-3291-333-A	PANEL ASSY, FRONT	
LCD801	1-810-845-21	DISPLAY PANEL, LIQUID CRYSTAL	

(3) MECHANISM DECK SECTION-1 (MG-305X-130)



Ref. No.	Part No.	Description	Remark
101	A-3298-222-A	SERVO BOARD, COMPLETE	
102	3-384-894-02	GEAR (R1)	
103	3-384-900-01	SPRING (PRESS)	
105	3-578-242-11	WASHER	
106	3-384-895-01	GEAR (R2)	
107	3-384-896-02	GEAR (DOWN)	
108	X-3366-858-3	ARM ASSY, FRICTION	
109	3-384-899-01	SPRING (FRICTION)	
110	3-384-892-01	BEARING (ROLLER)	
112	3-701-438-11	WASHER, 2.5	
113	3-323-231-11	ROLLER (LOWER)	
114	3-386-150-01	RING (ROLLER), RETAINING	
115	A-3252-591-A	GEAR ASSY, ROLLER	
116	X-3366-852-1	CHASSIS (M) ASSY	
117	3-384-923-02	SHAFT (DAMPER)	
118	3-384-916-01	SPRING (FL)	
119	3-384-914-01	DAMPER	
120	3-384-915-11	BRACKET (CP)	
121	3-384-918-01	RETAINER (DISC)	
122	3-384-908-11	ARM, CHUCKING	
124	3-384-888-06	SLIDER (L)	
125	3-384-887-03	LEVER (L)	
126	1-650-223-11	SENSOR FLEXIBLE BOARD	
127	A-3222-525-A	SENSOR BOARD, COMPLETE	
128	X-3366-854-1	CHASSIS (T) ASSY	
129	3-384-881-02	SPRING (12)	
130	3-384-917-01	SPRING (CH)	
132	X-3366-102-5	SLIDER (R) ASSY	
133	X-3366-853-3	CHASSIS (R) ASSY	
134	3-384-889-03	LEVER (R)	
135	3-384-897-01	GEAR (RACK)	
136	3-384-891-03	LEVER (ST)	
137	3-388-331-01	SPRING (T)	
138	3-387-776-01	BELT (L)	
* 139	3-704-132-01	LABEL (K), SELF	
140	X-3366-857-1	ARM ASSY, ROLLER	
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)	

(4) MECHANISM DECK SECTION-2
(MG-305X-130)



Ref. No.	Part No.	Description	Remark
151	A-3252-586-A	SHAFT (SL) ASSY	
⚠152	8-848-327-11	DEVICE, OPTICAL KSS-410A	
153	3-384-922-02	GEAR (SL FEED)	
154	3-384-920-01	RETAINER (SL FEED)	
*155	1-650-144-11	MOTOR BOARD	
156	1-646-402-31	MOTOR FLEXIBLE BOARD	
157	X-3366-855-1	CHASSIS (OPT) ASSY (OUTSERT)	
158	X-3366-100-4	BASE (DRIVING) ASSY	
159	3-384-912-01	GEAR (K2)	
160	3-570-615-00	POLY-WASHER (DIA. 1.2)	
161	3-384-913-11	SPRING (THRUST RETAINER)	
* 162	3-920-313-01	CUSHION (SL)	
163	3-918-062-01	TABLE, DISC	
164	1-652-794-11	PICK-UP FLEXIBLE BOARD	
M901	X-3367-484-1	MOTOR (SPENDLE) ASSY	
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

DISPLAY

SECTION 7
ELECTRICAL PARTS LIST

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description		Remark
		DISPLAY BOARD		
		**********		
		< CAPACITOR >		
C801	1-164-222-11	CERAMIC CHIP	0.22uF	25V
C802	1-164-232-11	CERAMIC CHIP	0.01uF	50V
C803	1-163-009-11	CERAMIC CHIP	0.001uF 10%	50V
C804	1-163-133-00	CERAMIC CHIP	470PF 5%	50V
		< CONNECTOR >		
CNP801	1-764-423-11	PIN, CONNECTOR 12P		
		< DIODE >		
D801	8-719-404-46	DIODE	MA110	
D818	8-719-987-45	DIODE	CL-155Y/PG-CD	
D819	8-719-987-45	DIODE	CL-155Y/PG-CD	
D820	8-719-987-45	DIODE	CL-155Y/PG-CD	
D821	8-719-987-45	DIODE	CL-155Y/PG-CD	
D822	8-719-987-45	DIODE	CL-155Y/PG-CD	
D823	8-719-987-45	DIODE	CL-155Y/PG-CD	
		< IC >		
IC801	8-759-246-16	IC	TC9240F	
		< LIQUID CRYSTAL DISPLAY >		
LCD801	1-810-845-21	DISPLAY PANEL, LIQUID CRYSTAL		
		< SWITCH >		
LSW801	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(⏏)
LSW802	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(CD)
LSW803	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(AF/TA)
LSW804	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(FM)
LSW815	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(DSPL)
LSW816	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(OFF)
LSW817	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(SEL)
LSW818	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(+)
LSW819	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(-)
LSW820	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(PRESET +⏭)
LSW821	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(PRESET ⏮-)
LSW822	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(MUTE)
LSW824	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(AMS/SEEK +⏭)
LSW825	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(AMS/SEEK ⏮-)
LSW826	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(LOUD)
LSW827	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(SENS)
LSW828	1-762-143-11	SWITCH, KEY BOARD (WITH LED)		(PTY)
		< PILOT LAMP >		
PL801	1-517-181-11	LAMP, PILOT (GREEN)		
PL802	1-517-181-11	LAMP, PILOT (GREEN)		
PL803	1-517-181-21	LAMP, PILOT (AMBER)		
PL804	1-517-181-21	LAMP, PILOT (AMBER)		
		< TRANSISTOR >		
Q801	8-729-904-66	TRANSISTOR	DTD113EK	
Q802	8-729-904-66	TRANSISTOR	DTD113EK	
		< RESISTOR >		
R801	1-219-286-21	METAL GLAZE	680 2%	1/16W
R802	1-219-286-21	METAL GLAZE	680 2%	1/16W
R803	1-219-286-21	METAL GLAZE	680 2%	1/16W
R808	1-219-302-21	METAL GLAZE	3.3K 2%	1/16W
R809	1-219-306-21	METAL GLAZE	4.7K 2%	1/16W
R810	1-219-310-21	METAL GLAZE	6.8K 2%	1/16W
R811	1-219-314-21	METAL GLAZE	10K 2%	1/16W
R812	1-219-318-21	METAL GLAZE	15K 2%	1/16W
R813	1-219-322-21	METAL GLAZE	22K 2%	1/16W
R814	1-219-338-21	METAL GLAZE	100K 2%	1/16W
R815	1-219-286-21	METAL GLAZE	680 2%	1/16W
R816	1-219-286-21	METAL GLAZE	680 2%	1/16W
R817	1-219-286-21	METAL GLAZE	680 2%	1/16W
R818	1-219-290-21	METAL GLAZE	1K 2%	1/16W
R819	1-219-294-21	METAL GLAZE	1.5K 2%	1/16W
R820	1-219-294-21	METAL GLAZE	1.5K 2%	1/16W
R821	1-219-330-21	METAL GLAZE	47K 2%	1/16W
R822	1-219-298-21	METAL GLAZE	2.2K 2%	1/16W
R823	1-219-302-21	METAL GLAZE	3.3K 2%	1/16W

Ref.No.	Part No.	Description			Remark
R824	1-219-302-21	METAL GLAZE	3.3K	2%	1/16W
R825	1-219-309-21	METAL GLAZE	6.2K	2%	1/16W
R826	1-219-324-21	METAL GLAZE	27K	2%	1/16W
R827	1-219-322-21	METAL GLAZE	22K	2%	1/16W
R828	1-219-330-21	METAL GLAZE	47K	2%	1/16W
R829	1-216-019-00	METAL CHIP	56	5%	1/10W
R830	1-216-027-00	METAL CHIP	120	5%	1/10W
R831	1-216-019-00	METAL CHIP	56	5%	1/10W
R832	1-216-027-00	METAL CHIP	120	5%	1/10W
R833	1-216-019-00	METAL CHIP	56	5%	1/10W
R834	1-216-027-00	METAL CHIP	120	5%	1/10W
R835	1-216-019-00	METAL CHIP	56	5%	1/10W
R836	1-216-027-00	METAL CHIP	120	5%	1/10W
R837	1-216-019-00	METAL CHIP	56	5%	1/10W
R838	1-216-027-00	METAL CHIP	120	5%	1/10W
R839	1-216-019-00	METAL CHIP	56	5%	1/10W
R840	1-216-027-00	METAL CHIP	120	5%	1/10W
R841	1-216-019-00	METAL CHIP	56	5%	1/10W
R842	1-216-027-00	METAL CHIP	120	5%	1/10W
R843	1-216-049-00	METAL CHIP	1K	5%	1/10W
R850	1-219-309-21	METAL GLAZE	6.2K	2%	1/16W
R853	1-216-041-00	METAL CHIP	470	5%	1/10W
R854	1-216-049-00	METAL CHIP	1K	5%	1/10W
R855	1-216-049-00	METAL CHIP	1K	5%	1/10W
R856	1-216-049-00	METAL CHIP	1K	5%	1/10W
R857	1-216-097-00	METAL CHIP	100K	5%	1/10W
R858	1-216-089-00	METAL CHIP	47K	5%	1/10W
R859	1-216-049-00	METAL CHIP	1K	5%	1/10W
R860	1-216-049-00	METAL CHIP	1K	5%	1/10W
R861	1-216-049-00	METAL CHIP	1K	5%	1/10W
		< SWITCH >			
SW809	1-762-357-21	SWITCH (6)			
SW810	1-762-357-21	SWITCH (5)			
SW811	1-762-357-21	SWITCH (4)			
SW812	1-762-357-21	SWITCH (SHUF 3)			
SW813	1-762-357-21	SWITCH (REPEAT 2)			
SW814	1-762-357-21	SWITCH (INTRO 1)			

****

Ref.No.	Part No.	Description			Remark
*	A-3222-885-A	MAIN BOARD, COMPLETE (German)			
		**********			
*	A-3222-887-A	MAIN BOARD, COMPLETE (AEP, Hong Kong)			
		**********			
*	3-921-801-01	HEAT SINK (T)			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C3	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C4	1-126-933-11	ELECT	100uF	20%	16V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-136-159-00	FILM	0.033uF	5%	50V
C7	1-104-679-11	MYLAR	0.0022uF	5%	50V
C8	1-104-683-11	MYLAR	0.0047uF	5%	50V
C9	1-136-227-11	MYLAR	0.001uF	5%	50V
C10	1-136-165-00	FILM	0.1uF	5%	50V
C11	1-136-169-00	FILM	0.22uF	5%	50V
C12	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C13	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C15	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C16	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C17	1-124-589-11	ELECT	47uF	20%	16V
C18	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C19	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C20	1-126-933-11	ELECT	100uF	20%	10V
C21	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C22	1-126-933-11	ELECT	100uF	20%	10V
C23	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C24	1-126-933-11	ELECT	100uF	20%	10V
C25	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C26	1-124-589-11	ELECT	47uF	20%	16V
C27	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C28	1-124-589-11	ELECT	47uF	20%	16V
C29	1-124-589-11	ELECT	47uF	20%	16V
C30	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C31	1-126-157-11	ELECT	10uF	20%	16V
C32	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C33	1-124-584-00	ELECT	100uF	20%	10V
C34	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C35	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C36	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C37	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C51	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C52	1-124-257-00	ELECT	2.2uF	20%	50V
C53	1-124-257-00	ELECT	2.2uF	20%	50V

MAIN

Ref. No.	Part No.	Description			Remark
C54	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C102	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C103	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V
C104	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C105	1-126-288-11	ELECT	4.7uF	20%	16V
C106	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C107	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C108	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C109	1-126-157-11	ELECT	10uF	20%	16V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-126-157-11	ELECT	10uF	20%	16V
C112	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C113	1-126-157-11	ELECT	10uF	20%	16V
C114	1-126-157-11	ELECT	10uF	20%	16V
C122	1-126-301-11	ELECT	1uF	20%	50V
C123	1-126-301-11	ELECT	1uF	20%	50V
C124	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C125	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C126	1-136-165-00	FILM	0.1uF	5%	50V
C127	1-136-165-00	FILM	0.1uF	5%	50V
C128	1-136-165-00	FILM	0.1uF	5%	50V
C129	1-136-165-00	FILM	0.1uF	5%	50V
C130	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C131	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C132	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C202	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C203	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V
C204	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C205	1-126-288-11	ELECT	4.7uF	20%	16V
C206	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C207	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C208	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C209	1-126-157-11	ELECT	10uF	20%	16V
C210	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C211	1-126-157-11	ELECT	10uF	20%	16V
C212	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C213	1-126-157-11	ELECT	10uF	20%	16V
C214	1-126-157-11	ELECT	10uF	20%	16V
C222	1-126-301-11	ELECT	1uF	20%	50V
C223	1-126-301-11	ELECT	1uF	20%	50V
C224	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C225	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C226	1-136-165-00	FILM	0.1uF	5%	50V
C227	1-136-165-00	FILM	0.1uF	5%	50V
C228	1-136-165-00	FILM	0.1uF	5%	50V
C229	1-136-165-00	FILM	0.1uF	5%	50V
C230	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C231	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C232	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

Ref. No.	Part No.	Description			Remark
C301	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-124-584-00	ELECT	100uF	20%	10V
C304	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C305	1-124-589-11	ELECT	47uF	20%	16V
C306	1-124-234-00	ELECT	22uF	20%	16V
C307	1-162-638-11	CERAMIC CHIP	1uF		16V
C311	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C312	1-124-257-00	ELECT	2.2uF	20%	50V
C313	1-126-157-11	ELECT	10uF	20%	16V
C317	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V
C318	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V
C320	1-164-232-11	CERAMIC CHIP	0.01uF	10%	100V
C321	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C322	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C323	1-136-169-00	FILM	0.22uF	5%	50V
C324	1-126-768-11	ELECT	2200uF	20%	16V
C325	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C327	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C328	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C329	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C330	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C331	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C332	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C401	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C402	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C403	1-124-584-00	ELECT	100uF	20%	10V
C404	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C405	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C406	1-124-584-00	ELECT	100uF	20%	10V
C408	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C410	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C411	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C412	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C413	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C414	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C415	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C416	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C417	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C418	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C419	1-126-159-11	ELECT	0.47uF	20%	50V
C420	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C421	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C422	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C423	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C424	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C425	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C426	1-163-251-11	CERAMIC CHIP	100PF	5%	50V

Ref. No.	Part No.	Description			Remark
C427	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C428	1-126-159-11	ELECT	0.47uF	20%	50V
C431	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C432	1-163-005-11	CERAMIC CHIP	470 PF	10%	50V
C451	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C452	1-126-933-11	ELECT	100uF	20%	16V
C453	1-126-933-11	ELECT	100uF	20%	16V
C454	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C501	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C502	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C503	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C504	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C505	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C506	1-126-157-11	ELECT	10uF	20%	16V
C507	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C508	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C509	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C601	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C602	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C603	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C604	1-163-063-11	CERAMIC CHIP	0.022uF	10%	50V
C605	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C606	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C607	1-126-154-11	ELECT	47uF	20%	6.3V
C608	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C651	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C652	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C653	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C701	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C702	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C703	1-126-154-11	ELECT	47uF	20%	6.3V
C704	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C705	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C706	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C751	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C901	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C902	1-126-157-11	ELECT	10uF	20%	16V
C903	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C904	1-127-556-11	ELECT(SOLID)	6.8uF	20%	16V
C905	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C906	1-126-157-11	ELECT	10uF	20%	16V
C907	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C908	1-163-038-00	CERAMIC CHIP	0.1uF	10%	25V
C909	1-162-638-11	CERAMIC CHIP	1uF		16V
C910	1-162-638-11	CERAMIC CHIP	1uF		16V
C911	1-126-301-11	ELECT	1uF	20%	50V
C912	1-125-701-11	CAP, DOUBLE LAYER		0.047F	
C913	1-124-584-00	ELECT	100uF	20%	10V
C914	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C951	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C952	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C953	1-124-234-00	ELECT	22uF	20%	16V
C954	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V

< CONNECTOR >

CNJ502	1-764-808-11	JACK (ANT) (AC IN)	
CNJ901	1-566-822-41	JACK (EZ-COMMANDER IN)	
CNP301	1-764-426-11	PLUG, CONNECTOR 15P	
CNP302	1-764-697-11	JACK, PIN 4P (OUT)	
CNP504	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P	
CNP901	1-764-422-11	PLUG, CONNECTOR 12P	

< DIODE >

D1	8-719-041-79	DIODE	MA721WA-TX
D2	8-719-041-79	DIODE	MA721WA-TX
D3	8-719-034-42	DIODE	MA4056-M(QZ)
D4	1-519-504-11	DIODE	GAP, DISCHARGE
D51	8-719-034-42	DIODE	MA4056-M(QZ)
D301	8-719-034-22	DIODE	MA4039-M(QZ)
D302	8-719-034-22	DIODE	MA4039-M(QZ)
D303	8-719-914-43	DIODE	DAN202K-T-146
D304	8-719-800-76	DIODE	1SS226
D305	8-719-109-97	DIODE	RD6.8ES-B2
D310	8-719-049-38	DIODE	1N5404TU
D311	8-719-914-44	DIODE	DAP202K
D321	8-719-914-92	DIODE	DA204K
D451	8-719-977-03	DIODE	DTZ5.6B
D601	8-719-800-76	DIODE	1SS226
D751	8-719-800-76	DIODE	1SS226
D752	8-719-034-46	DIODE	MA4062-M(QZ)
D753	8-719-422-64	DIODE	MA8062-M
D754	8-719-034-46	DIODE	MA4062-M(QZ)
D755	8-719-422-64	DIODE	MA8062-M
D901	8-719-109-97	DIODE	RD6.8ES-B2
D902	8-719-109-97	DIODE	RD6.8ES-B2
D903	8-719-022-90	DIODE	MA8160-M
D904	8-719-109-97	DIODE	RD6.8ES-B2
D905	8-719-914-44	DIODE	DAP202K
D906	8-719-977-12	DIODE	DTZ6.8B
D907	8-719-977-12	DIODE	DTZ6.8B
D908	8-719-977-12	DIODE	DTZ6.8B
D909	8-719-977-12	DIODE	DTZ6.8B
D910	8-719-109-97	DIODE	RD6.8ES-B2
D911	8-719-109-97	DIODE	RD6.8ES-B2
D912	8-719-977-12	DIODE	DTZ6.8B
D913	8-719-977-12	DIODE	DTZ6.8B
D914	8-719-977-12	DIODE	DTZ6.8B

MAIN

Ref. No.	Part No.	Description	Remark
D915	8-719-977-12	DIODE DTZ6.8B	
D916	8-719-914-44	DIODE DAP202K	
D951	8-719-914-44	DIODE DAP202K	
D952	8-719-423-23	DIODE MA8110-M	
D954	8-719-914-43	DIODE DAN202K-T-146	
		< FERRITE BEAD >	
FB901	1-414-135-11	MICRO INDUCTOR (CHIP)	
		< IC >	
IC1	8-759-062-66	IC TC7S66F	
IC2	8-759-062-66	IC TC7S66F	
IC3	8-759-823-81	IC LC7216M	
IC101	8-759-100-96	IC uPC4558G2	
IC201	8-759-100-96	IC uPC4558G2	
IC301	8-752-063-44	IC CXA1646Q	
IC304	8-759-260-77	IC HA13150A	
IC401	8-759-196-57	IC SM5874AM-ET	
IC402	8-759-100-96	IC uPC4558G2	
IC501	8-759-163-63	IC TDA7330BD-013TR	
IC601	8-759-332-47	IC MN1883220SZG	
IC651	8-759-075-66	IC TA75S01F(TE85L)	
IC701	8-759-335-20	IC uPD78058GC-031-3B9	
IC751	8-759-096-16	IC MM1175XFF	
IC901	8-759-182-76	IC BA3910B-V3	
IC902	8-759-097-36	IC RH5VA40AA	
		< JUMPER RESISTOR >	
JR101	1-216-295-00	CONDUCTOR, CHIP	
JR102	1-216-295-00	CONDUCTOR, CHIP	
JR103	1-216-295-00	CONDUCTOR, CHIP	
JR104	1-216-295-00	CONDUCTOR, CHIP	
JR201	1-216-295-00	CONDUCTOR, CHIP	
JR202	1-216-295-00	CONDUCTOR, CHIP	
JR203	1-216-295-00	CONDUCTOR, CHIP	
JR204	1-216-295-00	CONDUCTOR, CHIP	
JR301	1-216-295-00	CONDUCTOR, CHIP	
JR302	1-216-295-00	CONDUCTOR, CHIP	
JR601	1-216-296-00	CONDUCTOR, CHIP	
JR951	1-216-295-00	CONDUCTOR, CHIP	
		< COIL >	
L1	1-410-973-11	INDUCTOR 22uH	
L401	1-410-973-11	INDUCTOR 22uH	
L402	1-410-973-11	INDUCTOR 22uH	
L501	1-410-971-11	INDUCTOR 10uH	
L601	1-410-973-11	INDUCTOR 22uH	
L701	1-410-973-11	INDUCTOR 22uH	
		< TRANSISTOR >	
Q1	8-729-424-08	TRANSISTOR UN2111	
Q2	8-729-421-22	TRANSISTOR UN2211	
Q3	8-729-021-94	TRANSISTOR 2SK1657-T1B	
Q4	8-729-422-29	TRANSISTOR 2SD601A-S	
Q5	8-729-106-68	TRANSISTOR 2SD1615A-GP	
Q51	8-729-920-21	TRANSISTOR DTC314TKH04	
Q52	8-729-920-21	TRANSISTOR DTC314TKH04	
Q53	8-729-920-21	TRANSISTOR DTC314TKH04	
Q101	8-729-920-21	TRANSISTOR DTC314TKH04	
Q102	8-729-920-21	TRANSISTOR DTC314TKH04	
Q201	8-729-920-21	TRANSISTOR DTC314TKH04	
Q202	8-729-920-21	TRANSISTOR DTC314TKH04	
Q301	8-729-020-67	TRANSISTOR XN1A312-TX	
Q451	8-729-422-87	TRANSISTOR 2SB1073-R	
Q452	8-729-424-59	TRANSISTOR UN2212	
Q453	8-729-019-00	TRANSISTOR 2SD2394-G	
Q454	8-729-020-67	TRANSISTOR XN1A312-TX	
Q501	8-729-424-08	TRANSISTOR UN2111	
Q502	8-729-421-22	TRANSISTOR UN2211	
Q751	8-729-422-29	TRANSISTOR 2SD601A-S	
Q752	8-729-424-08	TRANSISTOR UN2111	
Q901	8-729-402-13	TRANSISTOR XN1501	
Q902	8-729-429-92	TRANSISTOR XN1211	
Q925	8-729-019-00	TRANSISTOR 2SD2394-G	
Q951	8-729-020-67	TRANSISTOR XN1A312-TX	
Q953	8-729-903-46	TRANSISTOR 2SB1132-P	
Q954	8-729-424-59	TRANSISTOR UN2212	
Q957	8-729-424-08	TRANSISTOR UN2111	
Q958	8-729-424-08	TRANSISTOR UN2111	
Q959	8-729-216-22	TRANSISTOR 2SA1162-G	
Q960	8-729-020-67	TRANSISTOR XN1A312-TX	
		< RESISTOR >	
R1	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R2	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R3	1-216-045-00	METAL CHIP 680 5% 1/10W	
R4	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R5	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R6	1-216-089-00	METAL CHIP 47K 5% 1/10W	
R7	1-216-037-00	METAL CHIP 330 5% 1/10W	
R8	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R9	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R10	1-216-075-00	METAL CHIP 12K 5% 1/10W	
R11	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R12	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

Ref. No.	Part No.	Description			Remark
R13	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R14	1-216-073-00	METAL CHIP	10K	5%	1/10W
R15	1-216-049-00	METAL CHIP	1K	5%	1/10W
R16	1-216-049-00	METAL CHIP	1K	5%	1/10W
R17	1-216-049-00	METAL CHIP	1K	5%	1/10W
R18	1-216-029-00	METAL CHIP	150	5%	1/10W
R51	1-216-075-00	METAL CHIP	12K	5%	1/10W
R52	1-216-073-00	METAL CHIP	10K	5%	1/10W
R53	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (German)
R53	1-216-077-00	METAL CHIP	15K	5%	1/10W (AEP, Hong Kong)
R54	1-216-065-00	METAL CHIP	4.7K	5%	1/10W (German)
R54	1-216-077-00	METAL CHIP	15K	5%	1/10W (AEP, Hong Kong)
R55	1-216-089-00	METAL CHIP	47K	5%	1/10W
R56	1-216-089-00	METAL CHIP	47K	5%	1/10W
R57	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-073-00	METAL CHIP	10K	5%	1/10W
R104	1-216-073-00	METAL CHIP	10K	5%	1/10W
R105	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R106	1-216-073-00	METAL CHIP	10K	5%	1/10W
R107	1-216-073-00	METAL CHIP	10K	5%	1/10W
R108	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R109	1-216-033-00	METAL CHIP	220	5%	1/10W
R110	1-216-033-00	METAL CHIP	220	5%	1/10W
R112	1-216-081-00	METAL CHIP	22K	5%	1/10W
R113	1-216-081-00	METAL CHIP	22K	5%	1/10W
R121	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R123	1-216-117-00	METAL CHIP	680K	5%	1/10W
R124	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R125	1-216-117-00	METAL CHIP	680K	5%	1/10W
R126	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R127	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R128	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R129	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R130	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R203	1-216-073-00	METAL CHIP	10K	5%	1/10W
R204	1-216-073-00	METAL CHIP	10K	5%	1/10W
R205	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R206	1-216-073-00	METAL CHIP	10K	5%	1/10W
R207	1-216-073-00	METAL CHIP	10K	5%	1/10W
R208	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R209	1-216-033-00	METAL CHIP	220	5%	1/10W
R210	1-216-033-00	METAL CHIP	220	5%	1/10W
R212	1-216-081-00	METAL CHIP	22K	5%	1/10W
R213	1-216-081-00	METAL CHIP	22K	5%	1/10W
R219	1-216-058-00	METAL CHIP	2.4K		1/10W
R220	1-216-061-00	METAL CHIP	3.3K		1/10W
R221	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R222	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R223	1-216-117-00	METAL CHIP	680K	5%	1/10W
R224	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R225	1-216-117-00	METAL CHIP	680K	5%	1/10W
R226	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R227	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R228	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R229	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R230	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R301	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R302	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R303	1-216-073-00	METAL CHIP	10K	5%	1/10W
R304	1-216-111-00	METAL CHIP	390K	5%	1/10W
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
R306	1-216-081-00	METAL CHIP	22K	5%	1/10W
R307	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R309	1-216-049-00	METAL CHIP	1K	5%	1/10W
R401	1-216-089-00	METAL CHIP	47K	5%	1/10W
R402	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R403	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R404	1-216-049-00	METAL CHIP	1K	5%	1/10W
R405	1-216-037-00	METAL CHIP	330	5%	1/10W
R406	1-216-025-00	METAL CHIP	100	5%	1/10W
R407	1-216-025-00	METAL CHIP	100	5%	1/10W
R408	1-216-025-00	METAL CHIP	100	5%	1/10W
R409	1-216-001-00	METAL CHIP	10	5%	1/10W
R410	1-216-001-00	METAL CHIP	10	5%	1/10W
R411	1-216-033-00	METAL CHIP	220	5%	1/10W
R412	1-216-081-00	METAL CHIP	22K	5%	1/10W
R413	1-216-081-00	METAL CHIP	22K	5%	1/10W
R414	1-216-081-00	METAL CHIP	22K	5%	1/10W
R415	1-216-081-00	METAL CHIP	22K	5%	1/10W
R416	1-216-085-00	METAL CHIP	33K	5%	1/10W
R417	1-216-085-00	METAL CHIP	33K	5%	1/10W
R419	1-216-093-00	METAL CHIP	68K	5%	1/10W
R420	1-216-097-00	METAL CHIP	100K	5%	1/10W
R421	1-216-093-00	METAL CHIP	68K	5%	1/10W
R422	1-216-073-00	METAL CHIP	10K	5%	1/10W
R423	1-216-073-00	METAL CHIP	10K	5%	1/10W
R424	1-216-061-00	METAL CHIP	3.3K		1/10W
R425	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R426	1-216-081-00	METAL CHIP	22K	5%	1/10W
R427	1-216-081-00	METAL CHIP	22K	5%	1/10W
R428	1-216-081-00	METAL CHIP	22K	5%	1/10W
R429	1-216-081-00	METAL CHIP	22K	5%	1/10W
R430	1-216-085-00	METAL CHIP	33K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R431	1-216-085-00	METAL CHIP	33K	5%	1/10W
R432	1-216-093-00	METAL CHIP	68K	5%	1/10W
R433	1-216-093-00	METAL CHIP	68K	5%	1/10W
R434	1-216-097-00	METAL CHIP	100K	5%	1/10W
R435	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R436	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R451	1-216-049-00	METAL CHIP	1K	5%	1/10W
R452	1-216-049-00	METAL CHIP	1K	5%	1/10W
R453	1-216-049-00	METAL CHIP	1K	5%	1/10W
R454	1-216-073-00	METAL CHIP	10K	5%	1/10W
R455	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R456	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R501	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R502	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R601	1-216-295-00	CONDUCTOR, CHIP			
R602	1-216-097-00	METAL CHIP	100K	5%	1/10W
R603	1-216-097-00	METAL CHIP	100K	5%	1/10W
R604	1-216-073-00	METAL CHIP	10K	5%	1/10W
R605	1-216-097-00	METAL CHIP	100K	5%	1/10W
R606	1-216-089-00	METAL CHIP	47K	5%	1/10W
R607	1-216-089-00	METAL CHIP	47K	5%	1/10W
R608	1-216-089-00	METAL CHIP	47K	5%	1/10W
R609	1-216-089-00	METAL CHIP	47K	5%	1/10W
R610	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R611	1-216-097-00	METAL CHIP	100K	5%	1/10W
R612	1-216-097-00	METAL CHIP	100K	5%	1/10W
R613	1-216-113-00	METAL CHIP	470K	5%	1/10W
R615	1-216-089-00	METAL CHIP	47K	5%	1/10W
R617	1-216-089-00	METAL CHIP	47K	5%	1/10W
R618	1-216-089-00	METAL CHIP	47K	5%	1/10W
R619	1-216-089-00	METAL CHIP	47K	5%	1/10W
R620	1-216-089-00	METAL CHIP	47K	5%	1/10W
R621	1-216-089-00	METAL CHIP	47K	5%	1/10W
R622	1-216-089-00	METAL CHIP	47K	5%	1/10W
R623	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R625	1-216-097-00	METAL CHIP	100K	5%	1/10W
R651	1-216-107-00	METAL CHIP	270K	5%	1/10W
R652	1-216-119-00	METAL CHIP	820K	5%	1/10W
R655	1-216-081-00	METAL CHIP	22K	5%	1/10W
R656	1-216-049-00	METAL CHIP	1K	5%	1/10W
R657	1-216-089-00	METAL CHIP	47K	5%	1/10W
R702	1-216-295-00	CONDUCTOR, CHIP			
R703	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R706	1-216-089-00	METAL CHIP	47K	5%	1/10W
R707	1-216-089-00	METAL CHIP	47K	5%	1/10W
R708	1-216-089-00	METAL CHIP	47K	5%	1/10W
R709	1-216-089-00	METAL CHIP	47K	5%	1/10W
R710	1-216-049-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R711	1-216-049-00	METAL CHIP	1K	5%	1/10W
R712	1-216-049-00	METAL CHIP	1K	5%	1/10W
R713	1-216-295-00	CONDUCTOR, CHIP			
R715	1-216-295-00	CONDUCTOR, CHIP			
R718	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R719	1-216-097-00	METAL CHIP	100K	5%	1/10W
R720	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R721	1-216-089-00	METAL CHIP	47K	5%	1/10W
R722	1-216-097-00	METAL CHIP	100K	5%	1/10W
R723	1-216-089-00	METAL CHIP	47K	5%	1/10W
R724	1-216-109-00	METAL CHIP	330K	5%	1/10W
R725	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R726	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R727	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R728	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R751	1-216-089-00	METAL CHIP	47K	5%	1/10W
R752	1-216-097-00	METAL CHIP	100K	5%	1/10W
R753	1-216-073-00	METAL CHIP	10K	5%	1/10W
R754	1-216-025-00	METAL CHIP	100	5%	1/10W
R755	1-216-025-00	METAL CHIP	100	5%	1/10W
R757	1-216-017-00	METAL CHIP	47	5%	1/10W
R903	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R904	1-216-049-00	METAL CHIP	1K	5%	1/10W
R905	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R906	1-216-075-00	METAL CHIP	12K	5%	1/10W
R907	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R908	1-216-089-00	METAL CHIP	47K	5%	1/10W
R909	1-216-073-00	METAL CHIP	10K	5%	1/10W
R910	1-216-075-00	METAL CHIP	12K	5%	1/10W
R911	1-216-089-00	METAL CHIP	47K	5%	1/10W
R912	1-216-077-00	METAL CHIP	15K	5%	1/10W
R913	1-216-097-00	METAL CHIP	100K	5%	1/10W
R914	1-216-073-00	METAL CHIP	10K	5%	1/10W
R915	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R916	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R920	1-216-025-00	METAL CHIP	100	5%	1/10W
R921	1-216-025-00	METAL CHIP	100	5%	1/10W
R922	1-216-049-00	METAL CHIP	1K	5%	1/10W
R923	1-216-049-00	METAL CHIP	1K	5%	1/10W
R924	1-216-049-00	METAL CHIP	1K	5%	1/10W
R925	1-216-049-00	METAL CHIP	1K	5%	1/10W
R926	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R927	1-216-025-00	METAL CHIP	100	5%	1/10W
R928	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R929	1-216-675-11	METAL CHIP	10K	0.5%	1/10W
R930	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R951	1-216-049-00	METAL CHIP	1K	5%	1/10W
R952	1-216-049-00	METAL CHIP	1K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R953	1-216-073-00	METAL CHIP	10K	5%	1/10W
R954	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R955	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R958	1-216-079-00	METAL CHIP	18K	5%	1/10W
R959	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R960	1-216-073-00	METAL CHIP	10K	5%	1/10W
R961	1-216-077-00	METAL CHIP	15K	5%	1/10W
R962	1-216-033-00	METAL CHIP	220	5%	1/10W
		< VARIABLE RESISTOR >			
RV651	1-238-716-11	RES, ADJ, METAL GLAZE 100K			
		< SWITCH >			
SW701	1-571-478-11	SWITCH, SLIDE (POWER SEL)			
SW901	1-571-532-21	SWITCH, TACTIL (RESET)			
		< THERMISTOR >			
TH951	1-806-715-11	THERMISTOR			
		< TUNER >			
TU1	A-3282-003-A	TUNER UNIT TUX-001(A)			
		< VIBRATOR >			
X1	1-577-126-51	VIBRATOR, CRYSTAL (7.2MHz)			
X401	1-579-280-31	VIBRATOR, CRYSTAL (16MHz)			
X501	1-760-556-11	VIBRATOR, CRYSTAL (4.332MHz)			
X601	1-579-952-21	VIBRATOR, CERAMIC (8.0MHz)			
X701	1-760-489-11	VIBRATOR, CERAMIC (5.0MHz)			
X702	1-579-886-21	VIBRATOR, CRYSTAL (32.768MHz)			
**********					
*	1-650-144-11	MOTOR BOARD			
		**********			
		< CONNECTOR >			
* CNJ303	1-750-160-21	CONNECTOR, FPC 7P			
		< SWITCH >			
S301	1-572-467-21	SWITCH, PUSH (1 KEY) (LIMIT)			
**********					

Ref. No.	Part No.	Description			Remark
	A-3222-525-A	SENSOR BOARD, COMPLETE (Including SENSOR FLEXIBLE BOARD)			
		**********			
		< DIODE >			
D801	8-719-045-75	DIODE CL-200IR-X-TU (12cm CD DET)			
D802	8-719-045-75	DIODE CL-200IR-X-TU (DISC DET)			
		< RESISTOR >			
R801	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R802	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
**********					
	1-650-223-11	SENSOR FLEXIBLE BOARD			
		**********			
		< SWITCH >			
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)			
**********					
*	A-3298-222-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C3	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C4	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C7	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C8	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C9	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C10	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C11	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C12	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C13	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C15	1-126-191-11	ELECT	0.47uF	20%	50V
C16	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C17	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C18	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C20	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C21	1-164-346-11	CERAMIC CHIP	1uF		16V
C22	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C23	1-164-346-11	CERAMIC CHIP	1uF		16V
C24	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C25	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C26	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C27	1-135-166-21	TANTALUM CHIP	47uF	10%	10V
C28	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V

SERVO

Ref. No.	Part No.	Description			Remark
C30	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C31	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C32	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C34	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C35	1-135-166-21	TANTALUM CHIP	47uF	10%	10V
		< CONNECTOR >			
CNJ1	1-766-491-11	CONNECTOR, FPC 17P			
* CNJ2	1-750-159-21	CONNECTOR, FPC 5P			
* CNJ3	1-750-160-21	CONNECTOR, FPC 7P			
CNJ4	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
* CNP1	1-580-055-21	PIN, CONNECTOR 2P			
		< IC >			
IC1	8-752-059-38	IC CXA1571M			
IC2	8-752-351-94	IC CXD2515Q			
IC3	8-759-823-87	IC LB1638M			
IC4	8-759-925-72	IC SN74HC02ANS			
IC5	8-759-087-55	IC MPC1732MR2			
IC6	8-759-087-53	IC MPC1730MR2			
		< COIL >			
L1	1-412-058-11	INDUCTOR CHIP	10uH		
L2	1-412-058-11	INDUCTOR CHIP	10uH		
L3	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU			
Q2	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU			
Q5	8-729-141-48	TRANSISTOR 2SB624-BV345			
		< RESISTOR >			
R1	1-216-024-00	METAL GLAZE	91	5%	1/10W
R2	1-216-001-00	METAL CHIP	10	5%	1/10W
R4	1-216-081-00	METAL CHIP	22K	5%	1/10W
R5	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8	1-216-081-00	METAL CHIP	22K	5%	1/10W
R9	1-216-075-00	METAL CHIP	12K	5%	1/10W
R10	1-216-075-00	METAL CHIP	12K	5%	1/10W
R11	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R12	1-216-077-00	METAL CHIP	15K	5%	1/10W
R13	1-216-077-00	METAL CHIP	15K	5%	1/10W
R14	1-216-097-00	METAL CHIP	100K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R17	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
R19	1-216-121-00	METAL CHIP	1M	5%	1/10W
R20	1-216-097-00	METAL CHIP	100K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R21	1-216-073-00	METAL CHIP	10K	5%	1/10W
R22	1-216-033-00	METAL CHIP	220	5%	1/10W
R23	1-216-033-00	METAL CHIP	220	5%	1/10W
R24	1-216-033-00	METAL CHIP	220	5%	1/10W
R25	1-216-073-00	METAL CHIP	10K	5%	1/10W
R28	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R29	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R30	1-218-758-11	METAL CHIP	180K	0.50%	1/10W
R31	1-218-758-11	METAL CHIP	180K	0.50%	1/10W
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W
R36	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R37	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R38	1-216-101-00	METAL CHIP	150K	5%	1/10W
		< VARIABLE RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET	22K		
RV2	1-238-091-11	RES, ADJ, CERMET	22K		
		< SWITCH >			
SW1	1-571-754-31	SWITCH, PUSH (1 KEY) (DISC SET)			

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MISCELLANTEOUS

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10	1-765-081-11	CORD (WITH CONNECTOR)
⚠152	8-848-327-11	DEVICE, OPTICAL KSS-410A
156	1-646-402-31	MOTOR FLEXIBLE BOARD
164	1-652-794-11	PICK-UP FLEXIBLE BOARD
F1	1-533-326-11	FUSE (BLADE TYPE) (AUTO FUSE) 3A
F2	1-533-331-11	FUSE (BLADE TYPE) (AUTO FUSE) 15A
M901	X-3367-484-1	MOTOR (SPENDLE) ASSY
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)
S901	1-692-441-11	SWITCH, MICROPHONE (DISC DET)

****

****

HARDWARE LIST

****

#1	7-621-255-25	SCREW +P 2X4
#2	7-621-770-67	SCREW +B 2.6X6
#3	7-621-770-XX	SCREW +PTT 2.6X8 (S)
#4	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT
#5	7-621-773-86	SCREW +PTT 2.6X4 (S)
#6	7-621-772-10	SCREW +B 2X4
#7	7-621-772-60	SCREW +B 2X12
#8	7-621-773-95	SCREW +PTT 2.6X6 (S)
#9	7-627-552-07	SCREW, PRECISION +P 1.7X2.5
#10	7-627-852-17	+P 1.7X4

The components identified by mark ⚠ or dotted line with mark. ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
#11	7-627-553-18	SCREW, PRECISION +P 2X2	
#13	7-627-553-37	SCREW, PRECISION +P 2X3	
#14	7-627-553-67	SCREW, PRECISION +P 2X5	
#15	7-621-775-50	SCREW +PTT 2.6X10 (S)	
#16	7-628-253-15	SCREW +PS 2X5	

****

ACCESSORIES & PACKING MATERIALS
****

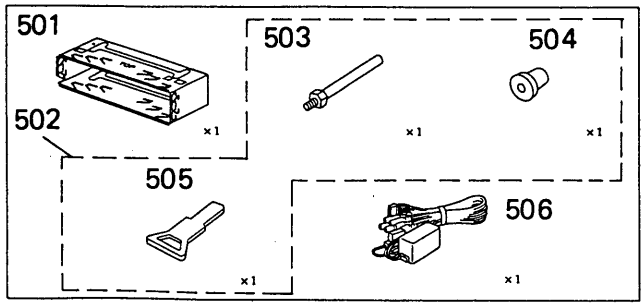
3-798-474-11 MANUAL, INSTRUCTION
(ENGLISH, FRENCH, GERMAN, ITALIAN)
3-798-474-41 MANUAL, INSTRUCTION (SPANISH,
PORUTUGUESE, DUTCH, SWEDISH) (AEP, Hong kong)
3-798-478-11 MANUAL, INSTRUCTION, INSTALL
(ENGLISH, FRENCH, GERMAN, ITALIAN)

3-798-478-41 MANUAL, INSTRUCTION, INSTALL
(SPANISH, PORUTUGUESE, DUTCH, SWEDISH)
(AEP, Hong Kong)
X-3367-795-1 CASE ASSY

****

MOUNTING HARDWARE
****

* 501	3-916-161-01	FRAME, FITTING	
502	X-3370-077-1	SCREW ASSY (KEY), FITTING	
503	3-386-828-01	SCREW, FITTING	
504	3-349-410-01	BUSHING	
505	3-388-078-01	KEY	
506	1-765-081-11	CORD (WITH CONNECTOR)	



CDX-5290RDS

SONY
SERVICE MANUAL

AEP Model
Hong Kong Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject: 1. Mechanism Deck Modification
2. MAIN Board Modification

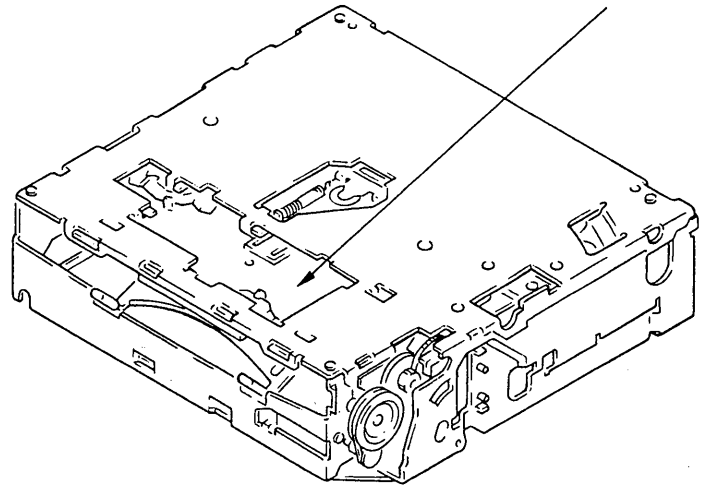
(ECN-CS501587/CS501600)

1. MECHANISM DECK MODIFICATION

The mechanism deck was changed from MG-305X-130 to MG-305M-130 in the middle of production.
This supplement-1 contains the printed wiring boards, the schematic diagram, the exploded views and electrical parts list for the new mechanism deck.

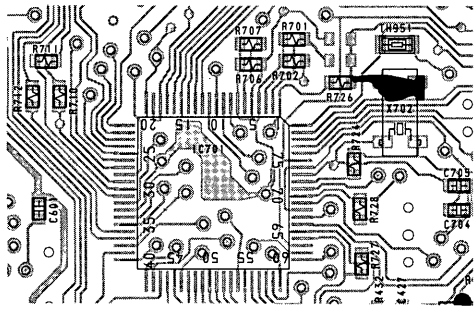
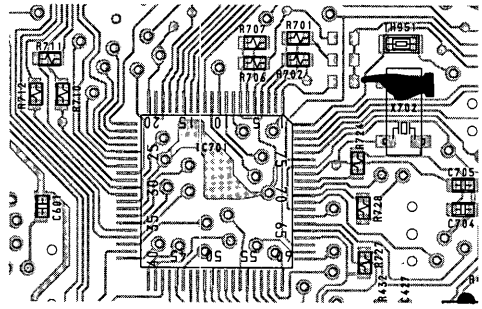
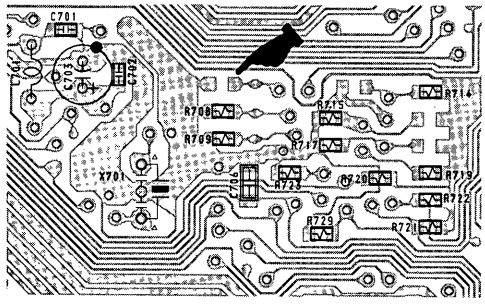
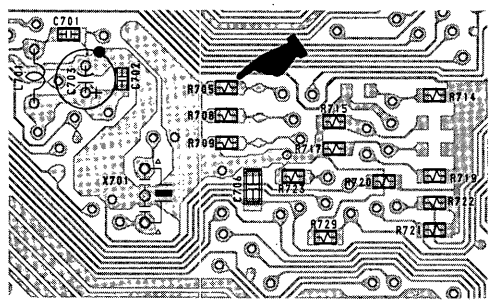
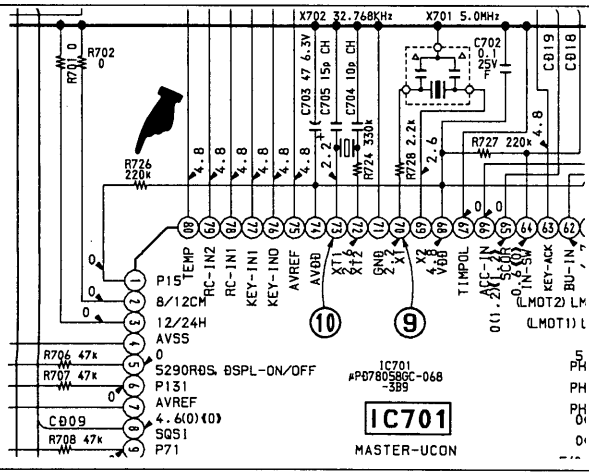
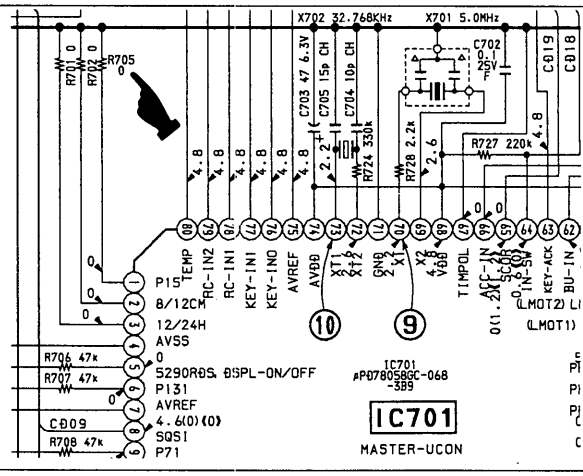
- **New/Former Discrimination**

Former type : There is SENSOR board.
New type : There is not SENSOR board.



There are some different parts on MAIN board between MG-305X-130 and MG-305M-130.

☛ : **different portion**

MG-305X-130	MG-305M-130
– COMPONENT SIDE –	– COMPONENT SIDE –
	
– CONDUCTOR SIDE –	– CONDUCTOR SIDE –
	
	

Ref No.	Part No.	Description
R705	———	———
R726	1-216-105-00	METAL CHIP 220K 5% 1/10W

Part No.	Description
1-216-295-00	CONDUCTOR, CHIP

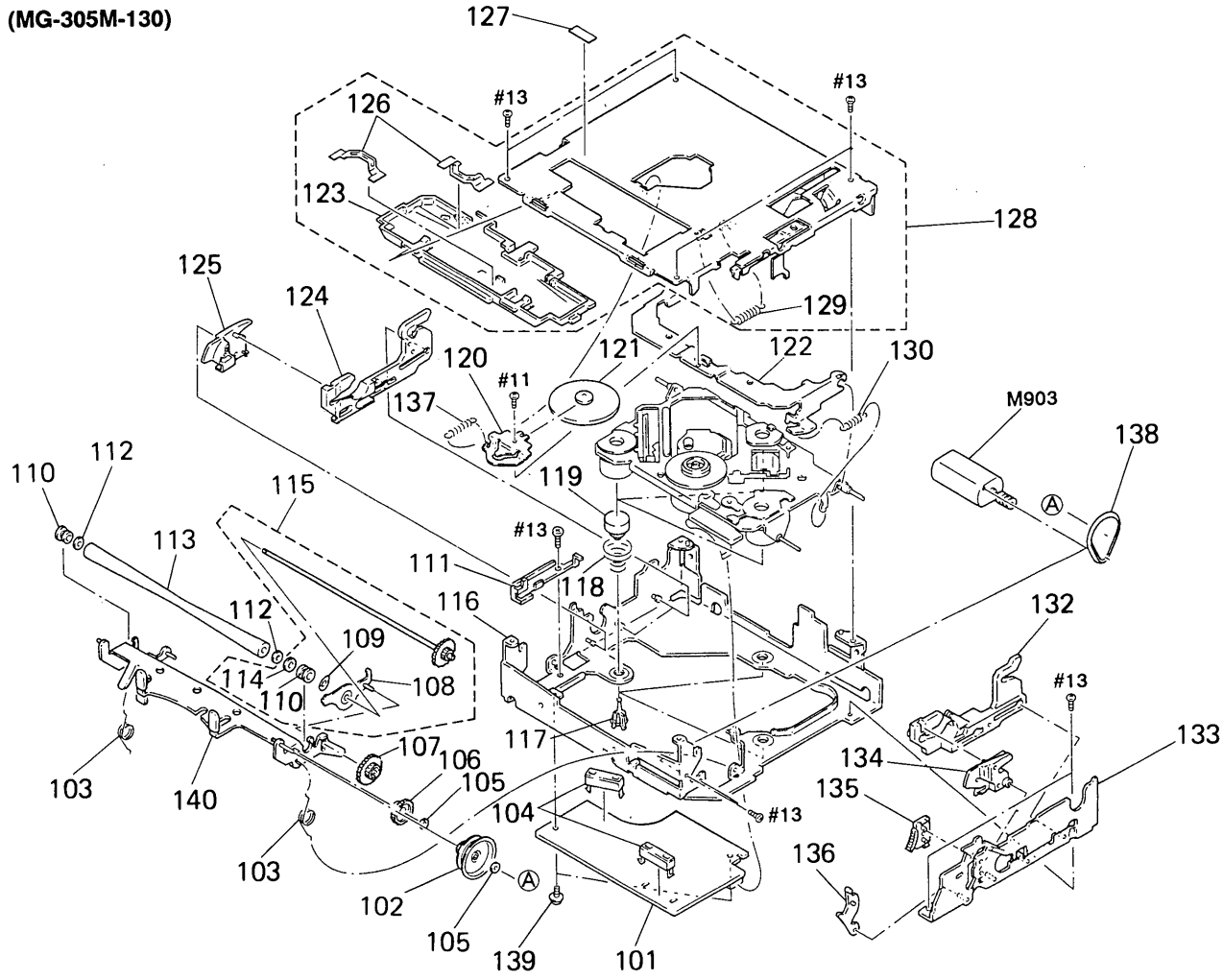
1-1. EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.

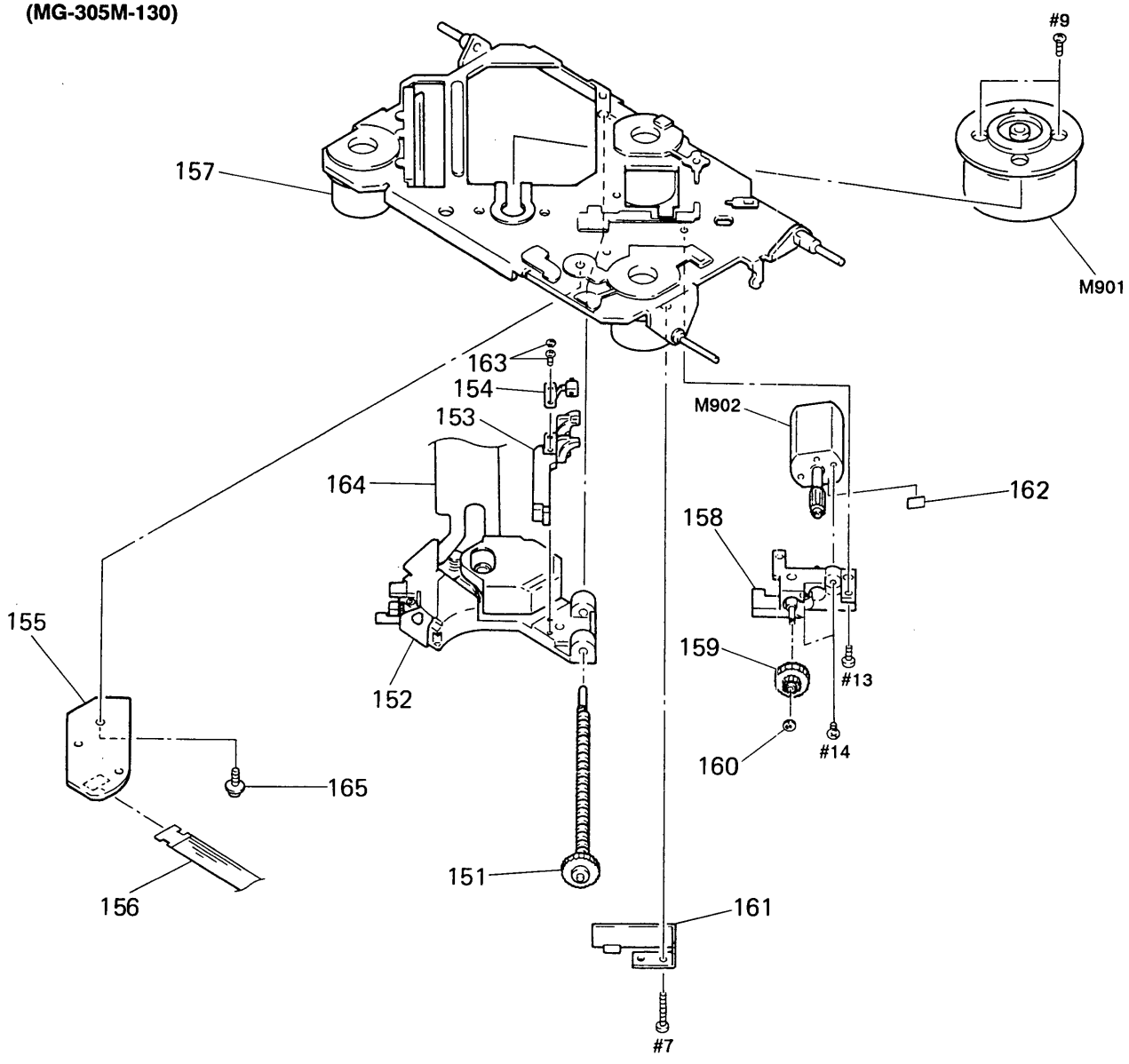
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1) MECHANISM DECK SECTION - 1 (MG-305M-130)



Ref. No.	Part No.	Description	Remark
101	A-3298-567-A	SERVO BOARD, COMPLETE	
102	3-384-894-01	GEAR (R1)	
103	3-384-900-01	SPRING (PRESS)	
104	3-921-946-01	HOLDER	
105	3-578-242-11	WASHER	
106	3-384-895-01	GEAR (R2)	
107	3-384-896-01	GEAR (DOWN)	
108	X-3366-858-4	ARM ASSY, FRICTION	
109	3-384-899-01	SPRING (FRICTION)	
110	3-384-892-01	BEARING (ROLLER)	
* 111	3-921-949-01	BRACKET (M)	
112	3-701-438-11	WASHER, 2.5	
113	3-909-408-01	ROLLER (T)	
114	3-386-150-01	RING (ROLLER), RETAINING	
115	A-3252-591-A	GEAR ASSY, ROLLER	
* 116	X-3366-852-1	CHASSIS (M) ASSY	
117	3-384-923-01	SHAFT (DAMPER)	
118	3-384-916-01	SPRING (FL)	
119	3-384-914-01	DAMPER	
* 120	3-384-915-11	BRACKET (CP)	
* 121	3-384-918-01	RETAINER (DISC)	
122	3-384-908-11	ARM, CHUCKING	
* 123	3-921-945-02	GUIDE (DISC M)	
124	3-384-888-01	SLIDER (L)	
125	3-384-887-01	LEVER (L)	
* 126	3-921-947-01	REFLECTOR	
* 127	3-704-132-01	LABEL (K), SELF	
* 128	X-3366-854-1	CHASSIS (T) ASSY	
129	3-384-881-02	SPRING (12)	
130	3-384-917-01	SPRING (CH)	
132	X-3366-102-1	SLIDER (R) ASSY	
* 133	X-3366-853-1	CHASSIS (R) ASSY	
134	3-384-889-01	LEVER (R)	
135	3-384-897-01	GEAR (RACK)	
136	3-384-891-01	LEVER (ST)	
137	3-388-331-01	SPRING (T)	
138	3-387-776-01	BELT (L)	
139	3-918-103-01	SCREW (TOOTH) (+P 2)	
* 140	X-3369-917-2	ARM ASSY, ROLLER	
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)	
#11	7-627-553-18	SCREW, PRECISION +P 2X2	
#13	7-627-553-37	SCREW, PRECISION +P 2X3	

(2) MECHANISM DECK SECTION - 2
(MG-305M-130)



Ref. No.	Part No.	Description	Remark
151	A-3252-586-A	SHAFT (SL) ASSY	
⚠152	8-848-327-11	OPTICAL PICK-UP KSS-410A	
153	3-384-922-01	GEAR (SL FEED)	
154	3-384-920-01	RETAINER (SL FEED)	
* 155	1-655-982-12	MOTOR BOARD	
156	1-653-376-11	MOTOR FLEXIBLE BOARD	
* 157	X-3370-190-1	CHASSIS (OPT) ASSY (OUTSERT)	
158	X-3366-100-1	BASE (DRIVING) ASSY	
159	3-384-912-01	GEAR (K2)	
160	3-570-615-00	POLY-WASHER (DIA. 1.2)	
161	3-384-913-11	SPRING (THRUST RETAINER)	

Ref. No.	Part No.	Description	Remark
* 162	3-920-313-01	CUSHION (SL)	
163	3-704-243-61	SCREW (P1.7X4.0)	
164	1-652-794-11	PICK-UP FLEXIBLE BOARD	
165	3-918-103-11	SCREW (TOOTH) (+P 2)	
M901	X-3367-484-2	MOTOR (SPINDLE) ASSY	
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)	
#7	7-621-772-60	SCREW +B 2X12	
#9	7-627-552-07	SCREW, PRECISION +P 1.7X2.5	
#13	7-627-553-37	SCREW, PRECISION +P 2X3	
#14	7-627-553-67	SCREW, PRECISION +P 2X5	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

1-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
*	1-655-982-12	MOTOR BOARD			
		**********			
		< CONNECTOR >			
	CNJ303 1-770-348-21	CONNECTOR, FPC 7P			
		< SWITCH >			
	SW301 1-571-754-31	SWITCH, PUSH (1 KEY) (LIMIT)			
**********					
	A-3298-567-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C2	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C3	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C4	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C7	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C8	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C9	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C10	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C11	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C12	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C13	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C15	1-126-191-11	ELECT	0.47uF	20%	50V
C16	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C17	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C18	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C20	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C21	1-164-346-11	CERAMIC CHIP	1uF		16V
C22	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C23	1-164-346-11	CERAMIC CHIP	1uF		16V
C24	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C25	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C26	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C27	1-135-166-21	TANTALUM CHIP	47uF	10%	10V
C28	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C30	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C31	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C32	1-164-492-11	CERAMIC CHIP	0.15uF	10%	16V
C34	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C35	1-135-166-21	TANTALUM CHIP	47uF	10%	10V
C38	1-163-089-00	CERAMIC CHIP	6PF		50V
C39	1-163-085-00	CERAMIC CHIP	2PF		50V
		< CONNECTOR >			
CNJ1	1-766-491-11	CONNECTOR, FPC 17P			
CNJ3	1-770-345-21	CONNECTOR, FPC 7P			
CNJ4	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
* CNP1	1-580-055-21	PIN, CONNECTOR 2P			
		< DIODE >			
D1	8-719-045-75	DIODE CL-200IR-X-TU			
D2	8-719-045-75	DIODE CL-200IR-X-TU			
		< IC >			
IC1	8-752-069-93	IC CXA1791M-T6			
IC2	8-752-351-94	IC CXD2515Q			
IC3	8-759-823-87	IC LB1638M			
IC4	8-759-925-72	IC SN74HC02ANS			
IC5	8-759-087-55	IC MPC1732MR2			
IC6	8-759-087-53	IC MPC1730MR2			
IC7	8-759-510-73	IC BA10393F-E2			
		< COIL >			
L1	1-412-058-11	INDUCTOR CHIP	10uH		
L2	1-412-058-11	INDUCTOR CHIP	10uH		
L3	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU			
Q2	8-729-024-26	PHOTO TRANSISTOR CPT-181S-C-TU			
Q5	8-729-141-48	TRANSISTOR 2SB624-BV345			

SERVO

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R1	1-216-024-00	METAL GLAZE	91	5%	1/10W
R2	1-216-009-00	METAL CHIP	22	5%	1/10W
R4	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R5	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R8	1-216-081-00	METAL CHIP	22K	5%	1/10W
R9	1-216-075-00	METAL CHIP	12K	5%	1/10W
R10	1-216-075-00	METAL CHIP	12K	5%	1/10W
R11	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R12	1-216-077-00	METAL CHIP	15K	5%	1/10W
R13	1-216-077-00	METAL CHIP	15K	5%	1/10W
R14	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R17	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R18	1-216-073-00	METAL CHIP	10K	5%	1/10W
R19	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R20	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R21	1-216-073-00	METAL CHIP	10K	5%	1/10W
R22	1-216-033-00	METAL CHIP	220	5%	1/10W
R23	1-216-033-00	METAL CHIP	220	5%	1/10W
R24	1-216-033-00	METAL CHIP	220	5%	1/10W
R25	1-216-073-00	METAL CHIP	10K	5%	1/10W
R28	1-216-687-11	METAL CHIP	33K	0.5%	1/10W
R29	1-216-687-11	METAL CHIP	33K	0.5%	1/10W
R30	1-218-756-11	METAL CHIP	150K	0.50%	1/10W
R31	1-218-756-11	METAL CHIP	150K	0.50%	1/10W
R32	1-216-073-00	METAL CHIP	10K	5%	1/10W
R35	1-216-073-00	METAL CHIP	10K	5%	1/10W
R36	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R37	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R38	1-216-083-00	METAL CHIP	27K	5%	1/10W
R51	1-216-031-00	METAL CHIP	180	5%	1/10W
R52	1-216-031-00	METAL CHIP	180	5%	1/10W
R53	1-216-117-00	METAL CHIP	680K	5%	1/10W
R54	1-216-117-00	METAL CHIP	680K	5%	1/10W
		< VARIABLE RESISTOR >			
RV1	1-223-587-11	RES, ADJ, CARBON 22K			
RV2	1-223-587-11	RES, ADJ, CARBON 22K			
		< SWITCH >			
SW1	1-571-754-31	SWITCH, PUSH (1 KEY) (DISC DET)			
SW2	1-571-754-31	SWITCH, PUSH (1 KEY) (DISC SET)			

****

Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS	
		**********	
⚠152	8-848-327-11	OPTICAL PICK-UP KSS-410A	
156	1-653-376-11	MOTOR FLEXIBLE BOARD	
164	1-652-794-11	PICK-UP FLEXIBLE BOARD	
M901	X-3367-484-2	MOTOR (SPINDLE) ASSY	
M902	A-3252-585-A	MOTOR (SL) ASSY (SLED)	
M903	A-3252-580-A	MOTOR (L) ASSY (LOADING)	

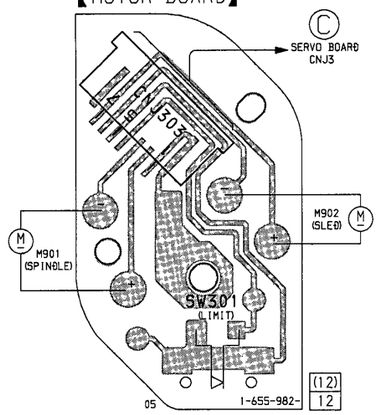
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

1-3. PRINTED WIRING BOARDS
– MECHANISM DECK Section –

• Semiconductor Location

Ref. No.	Location
D1	C-2
D2	E-5
IC4	B-6
Q1	C-1
Q2	E-7

【MOTOR BOARD】



• Semiconductor Location

Ref. No.	Location
IC1	B-4
IC2	D-2
IC3	D-7
IC5	B-2
IC6	A-2
IC7	D-6
Q5	C-5

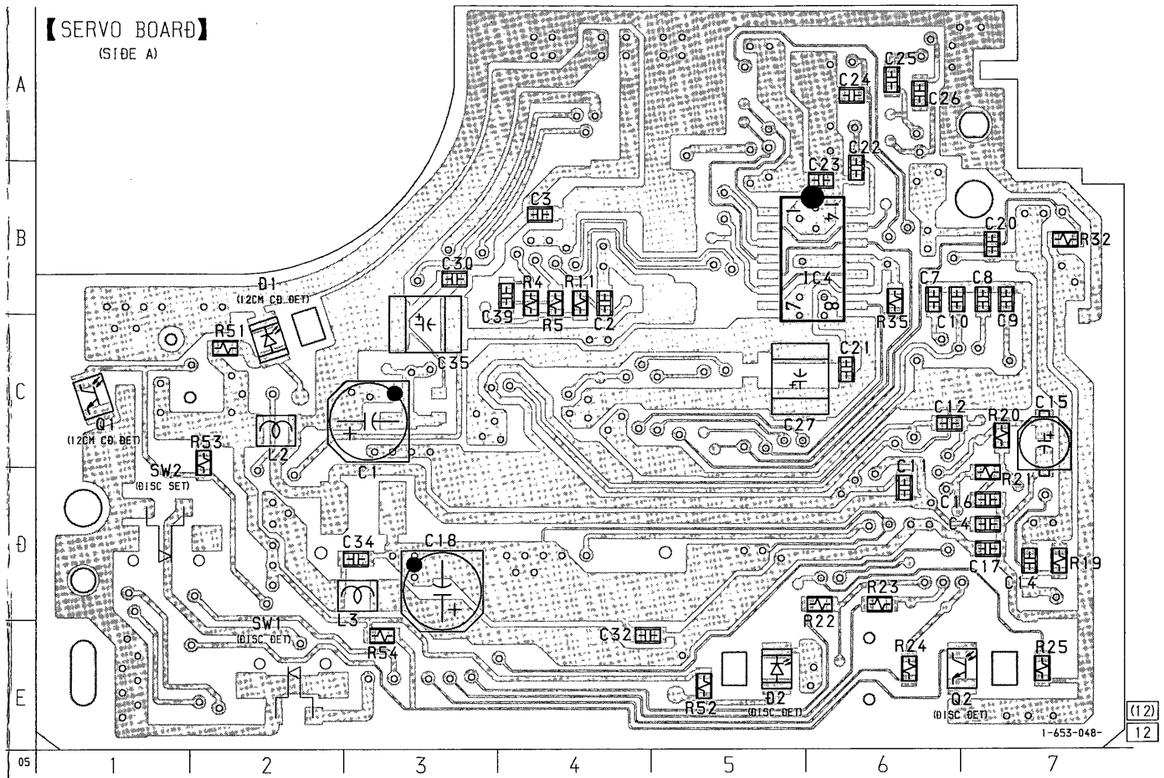
Note:

- ○—— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

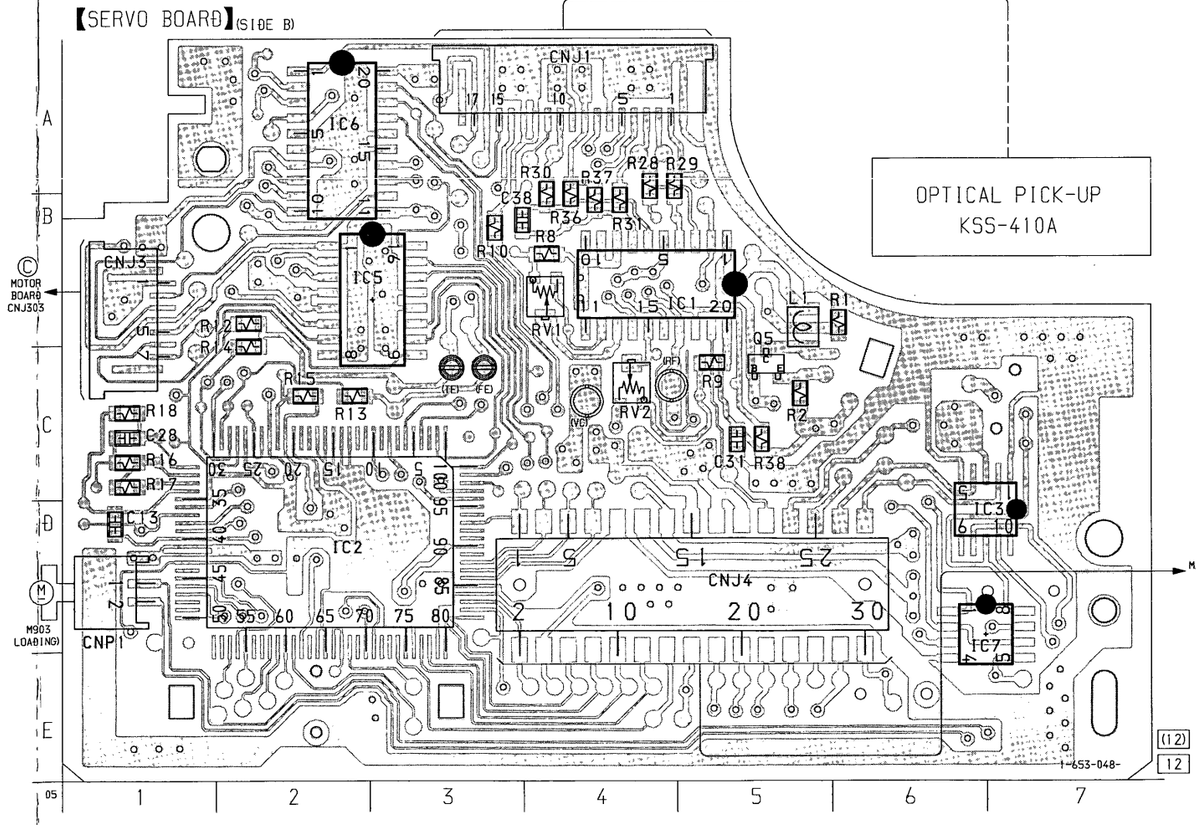
(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Side B)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Side A)	Parts on the parts face side seen from the parts face are indicated.

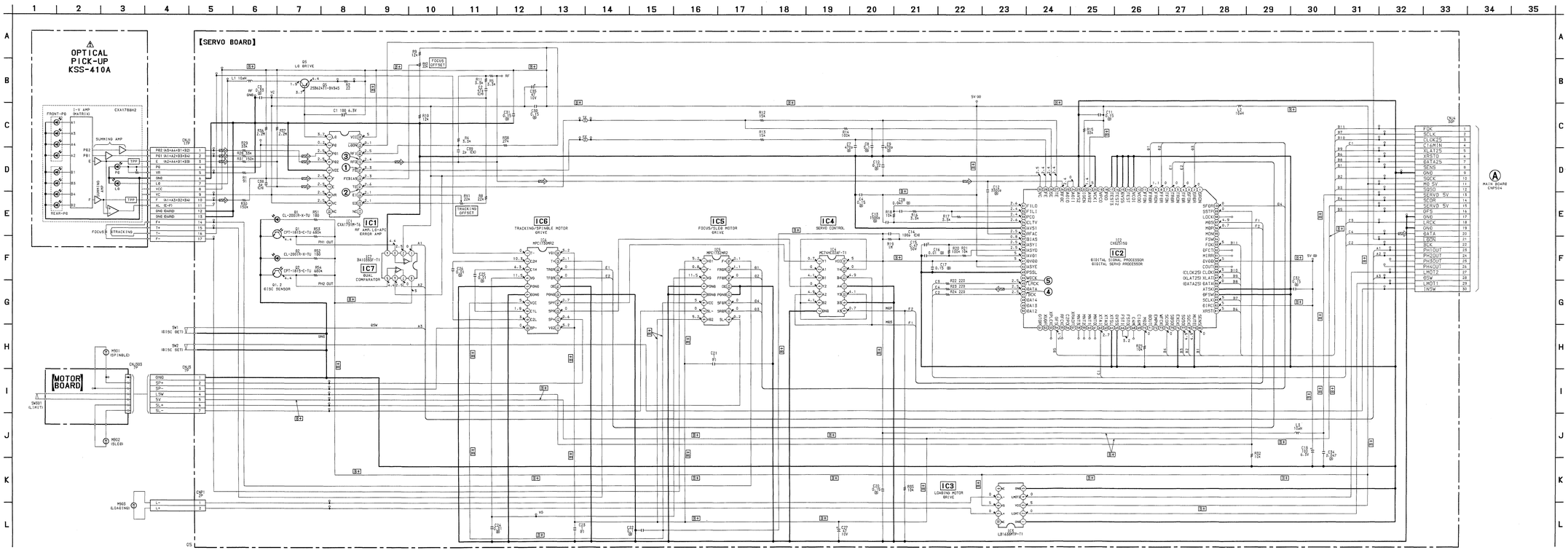
【SERVO BOARD】
(SIDE A)



【SERVO BOARD】(SIDE B)



1-4. SCHEMATIC DIAGRAM – MECHANISM DECK Section –



2. MAIN BOARD MODIFICATION

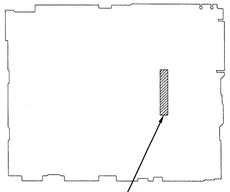
MAIN board has been modified in the middle of production.

This supplement-1 contains the printed wiring board, the schematic diagram and the electrical parts list for the new type.

● **New/Former Discrimination**

– **MAIN BOARD** –

【MAIN BOARD】 (Component Side)



Former type : 1-655-776-11, 12
New type : 1-655-776-13

2-1. SCHEMATIC DIAGRAM – MAIN Section –

【MAIN BOARD】

IC401 DIGITAL-FILTER D/A-CONVERTER

IC402

IC101 LINE-AMP

IC301 E.VOL/CTRL

IC201 LINE-AMP

IC304 POWER-AMP

IC651 D.M-BUFFER

IC601 TUNER-UCON

IC701 MASTER-UCON

IC751 UNILINK-CTRL

IC501 RDS-DEMODULATOR

IC3 TUNER-PLL

IC1 L.P.F-SW

IC2 L.P.F-SW

IC902 RESET

IC901 POWER-SUPPLY

Q101, 102, 201, 202 LINE MUTE

Q501, 502 RDS VB-SW

Q751, 752 SWITCH

Q957, 958 KEY ACTIVE SWITCH

Q951 TU MUTE SWITCH

Q961 MUTE SWITCH

Q1 AF SEEK SWITCH

Q2 AF MUTE SWITCH

Q3 ACC MUTE

Q4 TUNER-MUTE

Q5 S-METER

Q6 CD CHECK-SWITCH

Q7 AMP-RCD

Q8 ANT-RCD

Q9 TU-5V-RCD

Q10 TU-9V-RCD

Q11 TU-8.5V-RCD

Q12 B-UP-CHECK

Q13 ANT-MUTE

Q14 TEL-MUTE

Q15 TEL-MUTE

Q16 TEL-MUTE

Q17 TEL-MUTE

Q18 TEL-MUTE

Q19 TEL-MUTE

Q20 TEL-MUTE

Q21 TEL-MUTE

Q22 TEL-MUTE

Q23 TEL-MUTE

Q24 TEL-MUTE

Q25 TEL-MUTE

Q26 TEL-MUTE

Q27 TEL-MUTE

Q28 TEL-MUTE

Q29 TEL-MUTE

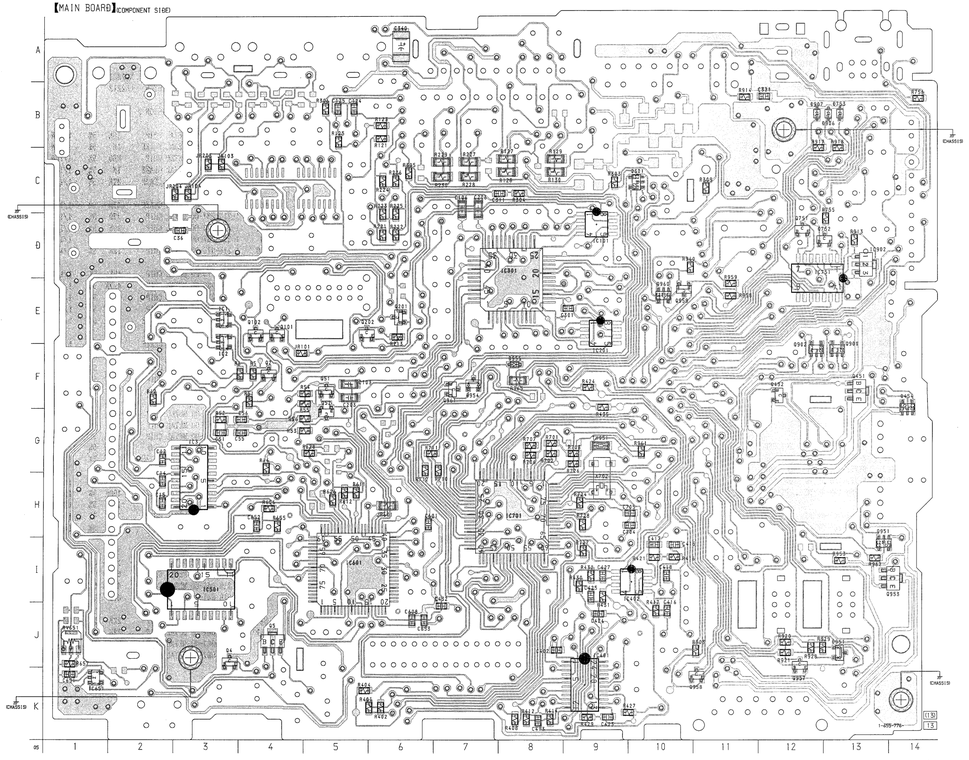
Q30 TEL-MUTE

Q31 TEL-MUTE

Q32 TEL-MUTE

Q33 TEL-MUTE

2-2. PRINTED WIRING BOARD – MAIN Section –



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• **Semiconductor Location**

Ref. No.	Location
D753	B-13
D905	B-13
D907	B-12
D951	J-13
D954	F-7
D955	F-8
IC1	E-3
IC2	F-3
IC3	G-3
IC101	D-9
IC201	F-9
IC301	D-8
IC401	J-9
IC402	I-10
IC501	I-3
IC601	I-5
IC651	K-1
IC701	H-8
IC751	D-13
IC902	D-13
Q2	F-4
Q4	J-3
Q5	J-4
Q51	F-5
Q52	G-5
Q101	E-4
Q102	E-4
Q201	E-6
Q202	E-5
Q301	C-10
Q451	F-13
Q452	F-12
Q454	F-14
Q751	D-12
Q752	D-13
Q901	F-13
Q902	F-12
Q951	I-13
Q953	I-14
Q957	K-12
Q958	K-11
Q959	E-10
Q960	E-10
Q961	F-7

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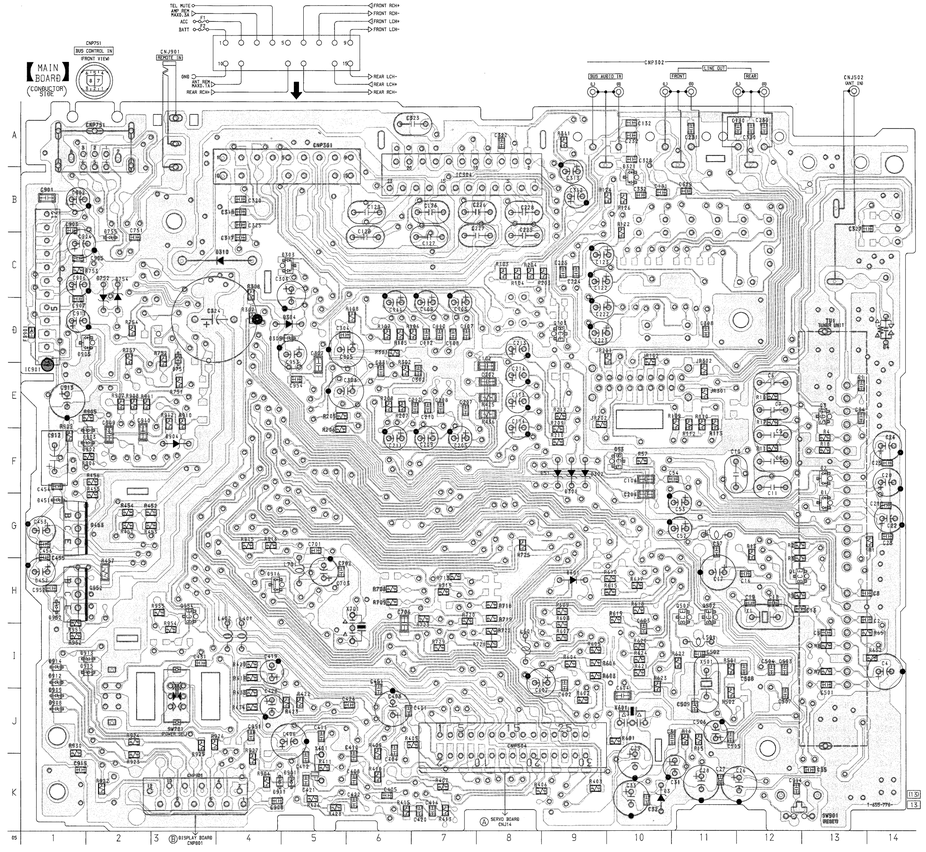

• **Semiconductor Location**

Ref. No.	Location
D1	G-13
D2	F-13
D3	K-10
D4	D-14
D51	F-9
D301	F-9
D302	F-9
D303	C-5
D304	D-5
D305	D-5
D310	C-4
D321	B-10
D451	G-1
D601	H-9
D751	D-3
D752	C-2
D754	C-2
D755	C-2
D901	K-5
D902	F-2
D903	F-2
D904	F-3
D905	D-2
D908	J-1
D909	J-1
D911	K-4
D912	I-1
D913	I-2
D914	I-1
D915	I-2
D916	H-4
D952	H-1
IC304	B-7
IC901	B-1
Q1	H-12
Q3	E-13
Q53	F-10
Q103	D-9
Q453	G-1
Q601	H-11
Q602	H-11
Q952	H-1
Q954	H-3

Note:

- ◇——— : parts extracted from the component side.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:

Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

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2-3. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- Abbreviation
  G:German HK:Hong Kong
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u:μ, for example:
  uA..: μA.. uPA..: μPA..
  uPB..: μPB.. uPC..: μPC.. uPD..: μPD..
- CAPACITORS
  uF: μF
- COILS
  uH: μH

When indicating parts by reference number, please include the board.

Ref.No.	Part No.	Description			Remark
*	A-3222-885-A	MAIN BOARD, COMPLETE (AEP/HK)			
*	A-3222-887-A	MAIN BOARD, COMPLETE (G)			
		**********			
*	3-921-801-01	HEAT SINK (T)			
*	3-924-933-01	SPACER (CN)			
		< CAPACITOR >			
C1	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C2	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C3	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C4	1-124-589-11	ELECT	47uF	20%	16V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-136-159-00	FILM	0.033uF	5%	50V
C7	1-104-679-11	MYLAR	0.0022uF	5%	50V
C8	1-104-683-11	MYLAR	0.0047uF	5%	50V
C9	1-136-227-11	MYLAR	0.001uF	5%	50V
C10	1-136-165-00	FILM	0.1uF	5%	50V
C11	1-136-169-00	FILM	0.22uF	5%	50V
C12	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C13	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C14	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C15	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C16	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C17	1-124-589-11	ELECT	47uF	20%	16V
C18	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C19	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C20	1-126-933-11	ELECT	100uF	20%	10V
C21	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C22	1-126-933-11	ELECT	100uF	20%	10V
C23	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C24	1-126-933-11	ELECT	100uF	20%	10V
C25	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C26	1-124-589-11	ELECT	47uF	20%	16V
C27	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C28	1-124-589-11	ELECT	47uF	20%	16V
C29	1-124-589-11	ELECT	47uF	20%	16V
C30	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C31	1-126-157-11	ELECT	10uF	20%	16V
C32	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C33	1-124-584-00	ELECT	100uF	20%	10V
C34	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C35	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C36	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C37	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C51	1-163-986-00	CERAMIC CHIP	0.027uF	10%	25V
C52	1-124-257-00	ELECT	2.2uF	20%	50V
C53	1-124-257-00	ELECT	2.2uF	20%	50V
C54	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C55	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C56	1-163-010-11	CERAMIC CHIP	0.0012uF	10%	50V
C102	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C103	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V
C104	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C105	1-126-288-11	ELECT	4.7uF	20%	16V
C106	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C107	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C108	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C109	1-126-157-11	ELECT	10uF	20%	16V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-126-157-11	ELECT	10uF	20%	16V
C112	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C113	1-126-157-11	ELECT	10uF	20%	16V
C114	1-126-157-11	ELECT	10uF	20%	16V
C122	1-126-301-11	ELECT	1uF	20%	50V
C123	1-126-301-11	ELECT	1uF	20%	50V
C124	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C125	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C126	1-136-165-00	FILM	0.1uF	5%	50V
C127	1-136-165-00	FILM	0.1uF	5%	50V
C128	1-136-165-00	FILM	0.1uF	5%	50V
C129	1-136-165-00	FILM	0.1uF	5%	50V
C130	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C131	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C132	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C202	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C203	1-104-329-11	CERAMIC CHIP	0.1uF	10%	50V
C204	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C205	1-126-288-11	ELECT	4.7uF	20%	16V

MAIN

Ref. No.	Part No.	Description			Remark
C206	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C207	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C208	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C209	1-126-157-11	ELECT	10uF	20%	16V
C210	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C211	1-126-157-11	ELECT	10uF	20%	16V
C212	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C213	1-126-157-11	ELECT	10uF	20%	16V
C214	1-126-157-11	ELECT	10uF	20%	16V
C222	1-126-301-11	ELECT	1uF	20%	50V
C223	1-126-301-11	ELECT	1uF	20%	50V
C224	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C225	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C226	1-136-165-00	FILM	0.1uF	5%	50V
C227	1-136-165-00	FILM	0.1uF	5%	50V
C228	1-136-165-00	FILM	0.1uF	5%	50V
C229	1-136-165-00	FILM	0.1uF	5%	50V
C230	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C231	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C232	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C301	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C303	1-124-584-00	ELECT	100uF	20%	10V
C304	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C305	1-124-584-00	ELECT	100uF	20%	10V
C306	1-124-234-00	ELECT	22uF	20%	16V
C307	1-162-638-11	CERAMIC CHIP	1uF		16V
C311	1-163-002-11	CERAMIC CHIP	270PF	10%	50V
C312	1-126-153-11	ELECT	22uF	20%	6.3V
C313	1-126-157-11	ELECT	10uF	20%	16V
C317	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C318	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C320	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C321	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C322	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C323	1-136-169-00	FILM	0.22uF	5%	50V
C324	1-126-597-11	ELECT	2200uF	20%	16V
C325	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C327	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C328	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C329	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C330	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C331	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C332	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C340	1-135-159-21	TANTALUM CHIP	10uF	10%	20V
C401	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C402	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C403	1-124-584-00	ELECT	100uF	20%	10V
C404	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C405	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C406	1-124-584-00	ELECT	100uF	20%	10V
C408	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C410	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C411	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C412	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C413	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C414	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C415	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C416	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C417	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C418	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C419	1-126-159-11	ELECT	0.47uF	20%	50V
C420	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C421	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C422	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C423	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C424	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C425	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C426	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C427	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C428	1-126-159-11	ELECT	0.47uF	20%	50V
C431	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C432	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C451	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C452	1-126-933-11	ELECT	100uF	20%	10V
C453	1-126-933-11	ELECT	100uF	20%	10V
C454	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C455	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C456	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C501	1-163-127-00	CERAMIC CHIP	270PF	5%	50V
C502	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C503	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C504	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C505	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C506	1-126-157-11	ELECT	10uF	20%	16V
C507	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C508	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C509	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C601	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C602	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C603	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C604	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C607	1-126-154-11	ELECT	47uF	20%	6.3V
C608	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C651	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C652	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C653	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C701	1-163-038-00	CERAMIC CHIP	0.1uF		25V

Ref. No.	Part No.	Description			Remark
C702	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C703	1-126-154-11	ELECT	47uF	20%	6.3V
C704	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C705	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C706	1-163-063-00	CERAMIC CHIP	0.022uF	10%	50V
C751	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C901	1-164-337-11	CERAMIC CHIP	2.2uF		16V
C902	1-126-157-11	ELECT	10uF	20%	16V
C903	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C904	1-127-556-11	ELECT(SOLID)	6.8uF	20%	16V
C905	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C906	1-126-157-11	ELECT	10uF	20%	16V
C907	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C908	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C909	1-162-638-11	CERAMIC CHIP	1uF		16V
C910	1-162-638-11	CERAMIC CHIP	1uF		16V
C911	1-126-301-11	ELECT	1uF	20%	50V
C912	1-125-701-11	CAP, DOUBLE LAYER	0.047F		
C913	1-124-584-00	ELECT	100uF	20%	10V
C914	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C915	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C951	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C952	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C953	1-124-234-00	ELECT	22uF	20%	16V
C954	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V

< JACK >

CNJ502	1-764-808-11	JACK (ANT)
CNJ901	1-566-822-41	JACK (REMOTE IN)

< CONNECTOR >

CNP301	1-764-426-11	PLUG, CONNECTOR 15P
CNP302	1-764-697-11	JACK, PIN 4P (LINE OUT/BUS AUDIO IN)
CNP504	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P BOARD
CNP901	1-764-422-11	PLUG, CONNECTOR 12P

< DIODE >

D1	8-719-041-79	DIODE	MA721WA-TX
D2	8-719-041-79	DIODE	MA721WA-TX
D3	8-719-034-42	DIODE	MA4056-M(QZ)
D4	1-519-504-11	DIODE	GAP, DISCHARGE
D51	8-719-034-42	DIODE	MA4056-M(QZ)
D301	8-719-034-22	DIODE	MA4039-M(QZ)
D302	8-719-034-22	DIODE	MA4039-M(QZ)
D303	8-719-914-43	DIODE	DAN202K
D304	8-719-050-86	DIODE	1SS133T-91S
D305	8-719-977-12	DIODE	DTZ6.8B
D310	8-719-049-38	DIODE	1N5404TU
D321	8-719-914-42	DIODE	DA204K
D451	8-719-977-03	DIODE	DTZ5.6B
D601	8-719-050-86	DIODE	1SS133T-91S
D751	8-719-404-46	DIODE	MA110
D752	8-719-034-46	DIODE	MA4062-M(QZ)
D753	8-719-422-64	DIODE	MA8062-M
D754	8-719-034-46	DIODE	MA4062-M(QZ)
D755	8-719-422-64	DIODE	MA8062-M
D901	8-719-977-12	DIODE	DTZ6.8B
D902	8-719-977-12	DIODE	DTZ6.8B
D903	8-719-022-90	DIODE	MA8160-M
D904	8-719-109-97	DIODE	RD6.8ES-B2
D905	8-719-914-44	DIODE	DAP202K
D906	8-719-977-12	DIODE	DTZ6.8B
D907	8-719-977-12	DIODE	DTZ6.8B
D908	8-719-977-12	DIODE	DTZ6.8B
D909	8-719-977-12	DIODE	DTZ6.8B
D911	8-719-977-12	DIODE	DTZ6.8B
D912	8-719-977-12	DIODE	DTZ6.8B
D913	8-719-977-12	DIODE	DTZ6.8B
D914	8-719-977-12	DIODE	DTZ6.8B
D915	8-719-977-12	DIODE	DTZ6.8B
D916	8-719-914-44	DIODE	DAP202K
D951	8-719-914-44	DIODE	DAP202K
D952	8-719-423-10	DIODE	MA8100-M-TX
D954	8-719-914-43	DIODE	DAN202K
D955	8-719-404-46	DIODE	MA110

< FERRITE BEAD >

FB901	1-414-135-11	INDUCTOR CHIP 0uH

< IC >

IC1	8-759-062-66	IC	TC7S66F
IC2	8-759-062-66	IC	TC7S66F
IC3	8-759-823-81	IC	LC7216M
IC101	8-759-100-96	IC	uPC4558G2
IC201	8-759-100-96	IC	uPC4558G2
IC301	8-752-063-44	IC	CXA1646Q
IC304	8-759-260-77	IC	HA13150A
IC401	8-759-196-56	IC	SM5874AM
IC402	8-759-100-96	IC	uPC4558G2
IC501	8-759-163-63	IC	TDA7330BD-013TR
IC601	8-759-358-65	IC	MN1883220SZL
IC651	8-759-075-66	IC	TA75S01F
IC701	8-759-335-20	IC	uPD78058GC-031-3B9
IC751	8-759-096-16	IC	MM1175XFF
IC901	8-759-347-50	IC	BA3918-V3
IC902	8-759-097-36	IC	RH5VA40AA

MAIN

Ref. No.	Part No.	Description		Remark
		< JUMPER RESISTOR >		
JR101	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR102	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR103	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR104	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR201	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR202	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR203	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR204	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR301	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR302	1-216-295-00	CONDUCTOR, CHIP	(2012)	
JR601	1-216-296-00	CONDUCTOR, CHIP	(3216)	
		< COIL >		
L1	1-410-973-11	INDUCTOR	22uH	
L401	1-410-973-11	INDUCTOR	22uH	
L402	1-410-973-11	INDUCTOR	22uH	
L501	1-410-971-11	INDUCTOR	10uH	
L601	1-410-973-11	INDUCTOR	22uH	
L701	1-410-973-11	INDUCTOR	22uH	
		< TRANSISTOR >		
Q1	8-729-424-08	TRANSISTOR	UN2111	
Q2	8-729-421-22	TRANSISTOR	UN2211	
Q3	8-729-021-94	TRANSISTOR	2SK1657-T1B	
Q4	8-729-422-29	TRANSISTOR	2SD601A-S	
Q5	8-729-106-68	TRANSISTOR	2SD1615A-GP	
Q51	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q52	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q53	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q101	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q102	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q201	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q202	8-729-920-21	TRANSISTOR	DTC314TKH04	
Q301	8-729-020-67	TRANSISTOR	XN1A312-TX	
Q451	8-729-422-87	TRANSISTOR	2SB1073-R	
Q452	8-729-424-59	TRANSISTOR	UN2212	
Q453	8-729-019-00	TRANSISTOR	2SD2394-G	
Q454	8-729-020-67	TRANSISTOR	XN1A312-TX	
Q501	8-729-424-08	TRANSISTOR	UN2111	
Q502	8-729-421-22	TRANSISTOR	UN2211	
Q751	8-729-422-29	TRANSISTOR	2SD601A-S	
Q752	8-729-424-08	TRANSISTOR	UN2111	
Q901	8-729-402-13	TRANSISTOR	XN1501	
Q902	8-729-429-92	TRANSISTOR	XN1211	
Q951	8-729-020-67	TRANSISTOR	XN1A312-TX	
Q952	8-729-019-00	TRANSISTOR	2SD2394-G	
Q953	8-729-903-46	TRANSISTOR	2SB1132-P	
Q954	8-729-424-59	TRANSISTOR	UN2212	
Q957	8-729-424-08	TRANSISTOR	UN2111	
Q958	8-729-424-08	TRANSISTOR	UN2111	
Q959	8-729-216-22	TRANSISTOR	2SA1162-G	
Q960	8-729-020-67	TRANSISTOR	XN1A312-TX	
Q961	8-729-424-59	TRANSISTOR	UN2212	
		< RESISTOR >		
R1	1-216-073-00	METAL CHIP	10K 5%	1/10W
R2	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R3	1-216-045-00	METAL CHIP	680 5%	1/10W
R4	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R5	1-216-089-00	METAL GLAZE	47K 5%	1/10W
R6	1-216-089-00	METAL GLAZE	47K 5%	1/10W
R7	1-216-037-00	METAL CHIP	330 5%	1/10W
R8	1-216-073-00	METAL CHIP	10K 5%	1/10W
R9	1-216-057-00	METAL CHIP	2.2K 5%	1/10W
R10	1-216-075-00	METAL CHIP	12K 5%	1/10W
R11	1-216-073-00	METAL CHIP	10K 5%	1/10W
R12	1-216-065-00	METAL CHIP	4.7K 5%	1/10W
R13	1-216-057-00	METAL CHIP	2.2K 5%	1/10W
R14	1-216-073-00	METAL CHIP	10K 5%	1/10W
R15	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R16	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R17	1-216-049-00	METAL GLAZE	1K 5%	1/10W
R18	1-216-029-00	METAL CHIP	150 5%	1/10W
R51	1-216-069-00	METAL CHIP	6.8K 5%	1/10W
R52	1-216-073-00	METAL CHIP	10K 5%	1/10W
R53	1-216-041-00	METAL CHIP	470 5%	1/10W(G)
R53	1-216-065-00	METAL CHIP	4.7K 5%	1/10W(AEP/HK)
R54	1-216-041-00	METAL CHIP	470 5%	1/10W(G)
R54	1-216-065-00	METAL CHIP	4.7K 5%	1/10W(AEP/HK)
R55	1-216-097-00	METAL GLAZE	100K 5%	1/10W
R56	1-216-097-00	METAL GLAZE	100K 5%	1/10W
R57	1-216-097-00	METAL GLAZE	100K 5%	1/10W
R103	1-216-073-00	METAL CHIP	10K 5%	1/10W
R104	1-216-061-00	METAL CHIP	3.3K 5%	1/10W
R105	1-216-069-00	METAL CHIP	6.8K 5%	1/10W
R106	1-216-075-00	METAL CHIP	12K 5%	1/10W
R107	1-216-075-00	METAL CHIP	12K 5%	1/10W
R108	1-216-069-00	METAL CHIP	6.8K 5%	1/10W
R109	1-216-041-00	METAL CHIP	470 5%	1/10W
R110	1-216-041-00	METAL CHIP	470 5%	1/10W
R112	1-216-081-00	METAL CHIP	22K 5%	1/10W
R113	1-216-081-00	METAL CHIP	22K 5%	1/10W
R121	1-216-067-00	METAL CHIP	5.6K 5%	1/10W
R122	1-216-067-00	METAL CHIP	5.6K 5%	1/10W

Ref. No.	Part No.	Description			Remark
R123	1-216-117-00	METAL CHIP	680K	5%	1/10W
R124	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R125	1-216-117-00	METAL CHIP	680K	5%	1/10W
R126	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R127	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R128	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R129	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R130	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R203	1-216-073-00	METAL CHIP	10K	5%	1/10W
R204	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R205	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R206	1-216-075-00	METAL CHIP	12K	5%	1/10W
R207	1-216-075-00	METAL CHIP	12K	5%	1/10W
R208	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R209	1-216-041-00	METAL CHIP	470	5%	1/10W
R210	1-216-041-00	METAL CHIP	470	5%	1/10W
R212	1-216-081-00	METAL CHIP	22K	5%	1/10W
R213	1-216-081-00	METAL CHIP	22K	5%	1/10W
R221	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R222	1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R223	1-216-117-00	METAL CHIP	680K	5%	1/10W
R224	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R225	1-216-117-00	METAL CHIP	680K	5%	1/10W
R226	1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R227	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R228	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R229	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R230	1-216-134-00	METAL CHIP	2.2	5%	1/8W
R301	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R302	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R303	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R304	1-216-111-00	METAL GLAZE	390K	5%	1/10W
R305	1-216-073-00	METAL CHIP	10K	5%	1/10W
R306	1-216-095-00	METAL CHIP	82K	5%	1/10W
R307	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R308	1-216-073-00	METAL CHIP	10K	5%	1/10W
R309	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R311	1-216-073-00	METAL CHIP	10K	5%	1/10W
R401	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R402	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R403	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R404	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R405	1-216-037-00	METAL CHIP	330	5%	1/10W
R406	1-216-025-00	METAL GLAZE	100	5%	1/10W
R407	1-216-025-00	METAL GLAZE	100	5%	1/10W
R408	1-216-025-00	METAL GLAZE	100	5%	1/10W
R409	1-216-001-00	METAL CHIP	10	5%	1/10W
R410	1-216-001-00	METAL CHIP	10	5%	1/10W

Ref. No.	Part No.	Description			Remark
R411	1-216-033-00	METAL CHIP	220	5%	1/10W
R412	1-216-081-00	METAL CHIP	22K	5%	1/10W
R413	1-216-081-00	METAL CHIP	22K	5%	1/10W
R414	1-216-081-00	METAL CHIP	22K	5%	1/10W
R415	1-216-081-00	METAL CHIP	22K	5%	1/10W
R416	1-216-085-00	METAL CHIP	33K	5%	1/10W
R417	1-216-085-00	METAL CHIP	33K	5%	1/10W
R419	1-216-093-00	METAL CHIP	68K	5%	1/10W
R420	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R421	1-216-093-00	METAL CHIP	68K	5%	1/10W
R422	1-216-073-00	METAL CHIP	10K	5%	1/10W
R423	1-216-073-00	METAL CHIP	10K	5%	1/10W
R424	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R425	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R426	1-216-081-00	METAL CHIP	22K	5%	1/10W
R427	1-216-081-00	METAL CHIP	22K	5%	1/10W
R428	1-216-081-00	METAL CHIP	22K	5%	1/10W
R429	1-216-081-00	METAL CHIP	22K	5%	1/10W
R430	1-216-085-00	METAL CHIP	33K	5%	1/10W
R431	1-216-085-00	METAL CHIP	33K	5%	1/10W
R432	1-216-093-00	METAL CHIP	68K	5%	1/10W
R433	1-216-093-00	METAL CHIP	68K	5%	1/10W
R434	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R435	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R436	1-216-214-00	METAL GLAZE	4.7K	5%	1/8W
R451	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R452	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R453	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R454	1-216-073-00	METAL CHIP	10K	5%	1/10W
R455	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R456	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R457	1-216-190-00	METAL GLAZE	470	5%	1/8W
R501	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R502	1-216-129-00	METAL CHIP	2.2M	5%	1/10W
R601	1-216-295-00	CONDUCTOR, CHIP			(2012)
R602	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R603	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R604	1-216-073-00	METAL CHIP	10K	5%	1/10W
R605	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R606	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R607	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R608	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R609	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R610	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R611	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R612	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R615	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R617	1-216-089-00	METAL GLAZE	47K	5%	1/10W

MAIN

Ref. No.	Part No.	Description			Remark
R618	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R619	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R620	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R621	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R622	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R623	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R626	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R628	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R651	1-216-107-00	METAL CHIP	270K	5%	1/10W
R652	1-216-119-00	METAL CHIP	820K	5%	1/10W
R655	1-216-081-00	METAL CHIP	22K	5%	1/10W
R656	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R657	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R702	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R703	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R706	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R707	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R708	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R709	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R710	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R711	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R712	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R713	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R715	1-216-295-00	CONDUCTOR, CHIP		(2012)	
R718	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R719	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R720	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R721	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R722	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R723	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R724	1-216-109-00	METAL CHIP	330K	5%	1/10W
R725	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R726	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R727	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R728	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R729	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R751	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R752	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R753	1-216-073-00	METAL CHIP	10K	5%	1/10W
R754	1-216-025-00	METAL GLAZE	100	5%	1/10W
R755	1-216-025-00	METAL GLAZE	100	5%	1/10W
R757	1-216-017-00	METAL GLAZE	47	5%	1/10W
R903	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R904	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R905	1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R906	1-216-075-00	METAL CHIP	12K	5%	1/10W
R907	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R908	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R909	1-216-073-00	METAL CHIP	10K	5%	1/10W
R910	1-216-075-00	METAL CHIP	12K	5%	1/10W
R911	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R912	1-216-077-00	METAL CHIP	15K	5%	1/10W
R913	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R914	1-216-073-00	METAL CHIP	10K	5%	1/10W
R915	1-208-806-11	METAL GLAZE	10K	2%	1/10W
R916	1-208-806-11	METAL GLAZE	10K	2%	1/10W
R917	1-216-025-00	METAL GLAZE	100	5%	1/10W
R918	1-216-025-00	METAL GLAZE	100	5%	1/10W
R920	1-216-025-00	METAL GLAZE	100	5%	1/10W
R921	1-216-025-00	METAL GLAZE	100	5%	1/10W
R923	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R924	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R925	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R926	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R927	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R928	1-208-806-11	METAL GLAZE	10K	2%	1/10W
R929	1-208-806-11	METAL GLAZE	10K	2%	1/10W
R930	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R951	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R952	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R953	1-216-073-00	METAL CHIP	10K	5%	1/10W
R954	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R955	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R958	1-216-079-00	METAL CHIP	18K	5%	1/10W
R959	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R960	1-216-073-00	METAL CHIP	10K	5%	1/10W
R961	1-216-077-00	METAL CHIP	15K	5%	1/10W
R962	1-216-033-00	METAL CHIP	220	5%	1/10W
R965	1-216-246-00	METAL GLAZE	100K	5%	1/8W
		< VARIABLE RESISTOR >			
RV651	1-238-716-11	RES, ADJ, METAL GLAZE 100K			
		< SWITCH >			
SW701	1-571-478-11	SWITCH, SLIDE (POWER SELECT)			
SW901	1-692-431-21	SWITCH, TACTILE (RESET)			
		< THERMISTOR >			
TH951	1-806-715-11	THERMISTOR			
		< TUNER >			
TU1	A-3282-003-A	TUNER UNIT (FM/AM) (TUX-001A)			
		< VIBRATOR >			
X1	1-577-126-51	VIBRATOR, CRYSTAL (7.2MHz)			
X401	1-579-280-31	VIBRATOR, CRYSTAL (16MHz)			

Ref. No.	Part No.	Description	Remark
X501	1-760-556-11	VIBRATOR, CRYSTAL (4.332MHz)	
X601	1-579-952-21	VIBRATOR, CERAMIC (8MHz)	
X701	1-760-489-11	VIBRATOR, CERAMIC (5MHz)	
X702	1-579-886-21	VIBRATOR, CRYSTAL (32.76MHz)	

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